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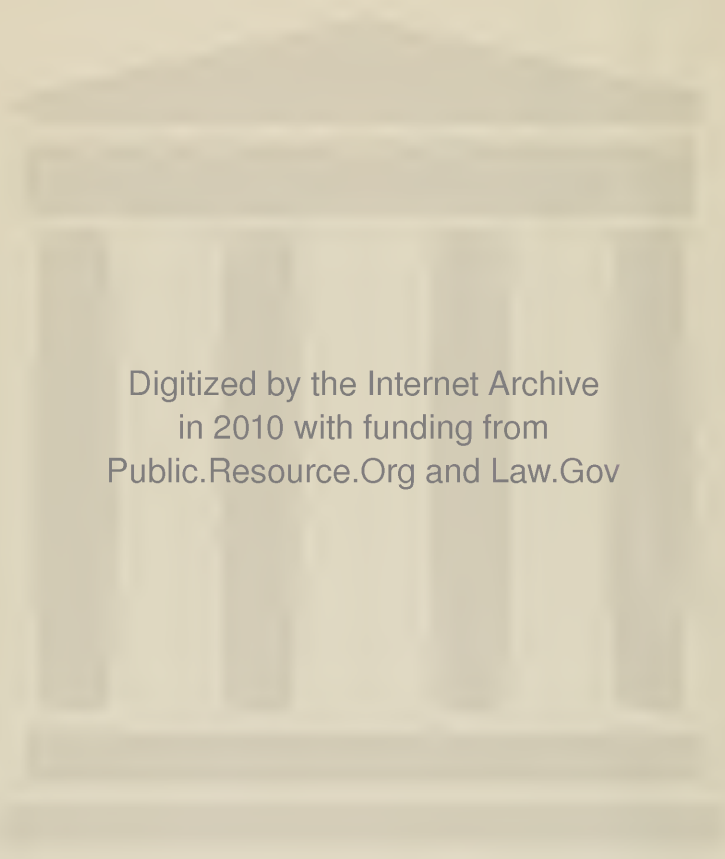
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United States /  
**Circuit Court of Appeals**

**For the Ninth Circuit.**

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COOLING TOWER COMPANY, INC., a Corporation,

Appellant and Cross-Appellee,

vs.

C. F. BRAUN & COMPANY, a Corporation,  
Appellee and Cross-Appellant.

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**Transcript of Record.**

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Upon Appeal and Cross-Appeal from the Southern  
Division of the United States District Court  
for the Northern District of California,  
Second Division.

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FILED

APR 8 1 1938

F. O. MONCKTON,  
CLERK





**United States**  
**Circuit Court of Appeals**  
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# INDEX TO THE PRINTED TRANSCRIPT OF RECORD.

[Clerk's Note: When deemed likely to be of an important nature, errors or doubtful matters appearing in the original certified record are printed literally in italic; and, likewise, cancelled matter appearing in the original certified record is printed and cancelled herein accordingly. When possible, an omission from the text is indicated by printing in italic the two words between which the omission seems to occur.]

	Page
Answer of Defendant.....	5
Assignment of Errors (C. F. Braun & Co.)....	408
Assignment of Errors (Cooling Tower Co., Inc.) .....	397
Bond on Appeal (C. F. Braun & Co.).....	413
Bond on Appeal (Cooling Tower Co., Inc.)....	405
Certificate of Clerk U. S. District Court to Transcript of Record.....	419
Certified Copy of Perpetual Injunction.....	392
Citation (C. F. Braun & Co.).....	420
Citation (Cooling Tower Co., Inc.).....	422
Complaint in Equity.....	1
<b>DEPOSITIONS ON BEHALF OF PLAINTIFF:</b>	
COFFEY, BARTON H.....	70
Cross-examination .....	78
Redirect Examination .....	86
Recalled .....	93
Recalled—Cross-examination .....	116
Redirect Examination .....	120
Cross-examination .....	123

Index.	Page
DEPOSITIONS ON BEHALF OF DE-	
FENDANT:	
PHILLIPS, LOUIS A.....	87
Recalled .....	101
Cross-examination .....	106
Recalled—Cross-examination .....	124
Redirect Examination .....	126
Interlocutory Decree .....	387
Memorandum Opinion .....	384
Names and Addresses of Attorneys of Record..	1
Notice Re Taking Depositions De Bene Esse of Louis A. Phillips et al. ....	132
Order Allowing Appeal (C. F. Braun & Co.)..	411
Order Allowing Appeal (Cooling Tower Co., Inc.) .....	405
Order Allowing Withdrawal of Original Ex- hibits .....	412
Perpetual Injunction .....	390
Petition for Appeal.....	395
Petition for Order Allowing Appeal.....	410
Reply of Plaintiff.....	44
Stipulated Praecipe for Transcript on Appeal	417
Stipulation Re Printing and Costs on Appeal..	416
TESTIMONY ON BEHALF OF PLAIN-	
TIFFF:	
BRAUN, CARL F.....	147
Cross-examination .....	182
Redirect Examination .....	226
HAGENBUCH, WALTER.....	140
Cross-examination .....	143

	Index.	Page
TESTIMONY ON BEHALF OF DE-		
FENDANT:		
BRAUN, C. F., Recalled.....		290
Cross-examination .....		298
Redirect Examination .....		308
Recross-examination .....		330
Redirect Examination .....		340
Recalled .....		364
Cross-examination .....		366
MOSER, CHARLES—Cross-examination.		342
Redirect Examination . . . . .		355
Recross-examination .....		360
SHATTUCK, CHARLES H. ....		265
Cross-examination .....		283





NAMES AND ADDRESSES OF ATTORNEYS  
OF RECORD.

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San Francisco, Calif.,  
Attorney for Plaintiff.

CHARLES E. TOWNSEND, Esq., Crocker Bldg.,  
San Francisco, Calif.,  
Attorney for Defendant.

---

In the Southern Division of the United States Dis-  
trict Court, Northern District of California,  
Second Division.

IN EQUITY—923.

COOLING TOWER COMPANY, INC., a Cor-  
poration,

Plaintiff,

against

C. F. BRAUN & CO., a Corporation,

Defendant.

COMPLAINT IN EQUITY.

Plaintiff for its bill of complaint alleges:

1. That it is and was at all the times herein men-  
tioned a corporation organized and existing under  
and by virtue of the laws of the State of New  
York and a citizen of said state, having its prin-  
cipal place of business in the city of New York,  
county of New York, in the Southern District of  
New York.

2. That defendant was at all the times herein mentioned a corporation organized and existing under and by virtue of the laws of the State of California, having its principal place of business in the city and county of San Francisco, Northern District of California, Southern Division, at which place the acts of infringement hereinafter complained of, were committed.

3. That prior to May 24th, 1911, Barton H. Coffey, being within the meaning of the Patent Laws of the United States of America, the inventor of certain new and useful devices for cooling liquids and being entitled to a patent thereon under the provisions of said patent laws, duly filed his application for letters patent on said improvements in the United States Patent Office and on the 28th day of November, 1911, all of the requirements of the Patent Office [1\*] of the United States, then in force having been complied with and Barton H. Coffey having prior to November 28, 1911, duly assigned his entire right, title and interest in and to the letters patent to be issued for said improvements to the Mitchell-Tappen Company, a corporation of the State of New York, letters patent of the United States were granted on said application to Mitchell-Tappen Company, a corporation of New York, bearing No. 1,010,020 and thereafter by deed of assignment duly executed and recorded in the United States Patent Office, the said letters patent No. 1,010,020 and all right, title and interest therein and thereunder,

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\*Page-number appearing at foot of page of original certified Transcript of Record.



together with all rights, to back damages and profits due or accrued arising out of past infringements of said letters patent and the right to suit to recover the same, were by assignment in writing, sold, assigned and transferred to plaintiff and by virtue thereof this plaintiff became and now is the sole and exclusive owner of all of the said rights and privileges and exclusively entitled to maintain this suit.

4. That mechanisms containing the said invention have been made, used and sold by plaintiff in the United States in great numbers and plaintiff has expended large sums of money in perfecting the said patented invention.

5. That the said defendant has within six years last past, in the Southern District of California and elsewhere in the United States of America, made, used and sold and is now making, using and selling devices for cooling liquids in infringement of said letters patent and the claims thereof without the license or consent of this plaintiff and threatens to continue so to do and is advertising the same for use and sale, and is distributing circulars in [2] which he pretends to be the owner thereof and in disregard and violation of the rights of the plaintiff.

6. That the defendant was duly notified by this plaintiff of plaintiff's rights under said letters patent and of his infringement, and was requested to desist therefrom, but the defendant has ignored said notices and has continued his said cause of infringement with-

out right to the great damage of this plaintiff.

WHEREFORE, the plaintiff prays:

(a) For process requiring the defendant to answer this bill of complaint.

(b) For an injunction, both provisional and perpetual, enjoining and restraining the defendant, his servants, attorneys and workmen and each and every one of them from infringement of plaintiff's said letters patent and the claims thereof.

(c) That the defendant be required to account for and pay to this plaintiff the profits derived by said defendant from his said infringements and the damages suffered by this plaintiff thereby and the costs of this suit and that said damages be trebled.

(d) For such other or further relief as the circumstances of this case require.

EDWARD A. O'BRIEN,

Solicitors for Plaintiff.

ANDREW FOULDS, Jr.,

Of Counsel. [3]

United States of America, Southern District of  
New York.

State of New York,  
County of New York,—ss.

A. Bonnell Tappen, on this 29th day of June, 1922, before me personally appeared A. Bonnell Tappen, president of the Cooling Tower Company, Inc., the above-named plaintiff, who being by me first duly sworn, deposes and says that he has read the foregoing bill of complaint and knows the con-

tents thereof and that the same is true of his own knowledge except as to the matters therein stated to be alleged upon information and belief, and as to those matters he believes it to be true, and that he believes Barton H. Coffey to be the true, original and sole inventor of the infringement described and complained in the letters patent referred to in said bill of complaint.

A. BONNELL TAPPEN.

[Seal] HARRY J. NEUSCHAFER,  
Notary Public, Kings Co. No. 129. Certificate  
filed in Kings Co. Reg. Office No. 3052. County  
Clerk's Office, New York Co., No. 147, N. Y.  
Co. Reg. Office No. 3109. Queens County  
Clerk's Office No. 456.

Term expires March 30, 1923.

[Endorsed]: Filed Dec. 22, 1922. W. B. Maling,  
Clerk. By J. A. Schaertzer, Deputy Clerk. [4]

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(Title of Court and Cause.)

ANSWER OF DEFENDANT.

Now comes C. F. Braun & Co., defendant above-named, and answering the bill of complaint filed herein by plaintiff above named, admits, denies and alleges as follows:

I.

Answering paragraph 1 of said bill of complaint, defendant alleges that it is without knowledge of the several allegations in said paragraph, and

therefore, leaves plaintiff to make such proof thereof as it may be advised.

## II.

Answering paragraph 2 of said bill of complaint, defendant admits that it is a corporation organized and existing under and by virtue of the laws of the State of California, denies that it has a place of business in the city and county of San Francisco, Northern Judicial District of California, and denying that it has committed any act of infringement, as alleged in said bill of complaint, within said Northern Judicial District of California, or at any other point or place, or that it has in any manner or form, at any time or at any place, infringed upon any rights of plaintiff under letters patent No. 1,010,020, as alleged in said Bill of Complaint.

## III.

Answering paragraph 3 of said bill of complaint, defendant denies that prior to the 24th day of May, 1911, or at any other time, or at all, one Barton H. Coffey was, within the meaning of the patent laws of the United States, or at all, the inventor of a certain new and useful or any device for cooling liquids, and denies that said Barton H. Coffey was entitled to a patent thereon under the provision of said patent laws, and is not informed, except by the bill of complaint, whether or not upon said date, said Barton H. Coffey did duly, or otherwise, file [5] in the Patent Office of the United States, his application for letters patent for said alleged invention; but admits that



on the 28th day of November, 1911, letters patent of the United States, No. 1,010,020, were granted or issued to Mitchell-Tappen Company; defendant not being advised except by the allegation of said bill of complaint, whether the said Mitchell-Tappen Company is, or was, a corporation of New York, leaves to plaintiff herein to make such proof thereof as it may deem advisable; and defendant further denies that said Barton H. Coffey did on, or prior to November 29th, 1911, or at any other time, duly, or otherwise, assign his entire or any right, title and interest in and to said letters patent No. 1,010,020, or to the alleged invention, or to any application made for letters patent, to the Mitchell-Tappen Company, and defendant denies further that thereafter, or at any time, by deed of assignment duly executed and recorded in the United States Patent Office, the said letters patent No. 1,010,020, and all, or any right, title or interest therein or thereunder, together with all, or any, rights to back damages and profits, or to any damages or profits, due or accrued arising out of past infringement of said letters patent, and that the right to sue to recover the same were by assignment in writing, or in any other manner, sold, assigned and/or transferred to plaintiff herein, and denies that by virtue of any alleged sale, assignment or transfer, set forth in said bill of complaint, the plaintiff herein became, or now is, the sole and exclusive owner, or any owner, of all, or any, rights or privileges under said letters patent, or that the said plaintiff is exclu-

sively entitled, or in any manner entitled, to maintain this suit.

#### IV.

Answering paragraph 4 of said bill of complaint, defendant denies that mechanisms or devices containing the said alleged invention have been made, used or sold by plaintiff in the United States or elsewhere, in great numbers, or in any numbers, and denies that plaintiff has expended large, or any, sums of money in perfecting the said device, or any device, alleged to [6] be patented under letters patent No. 1,010,020.

#### V.

Answering paragraph 5 of said bill of complaint, defendant denies that within the six (6) years last past, or at any other time, in the Southern District of California, or elsewhere in the United States of America, the defendant has made, used, and/or sold, and/or is now making, using, and/or selling any device or devices for cooling liquids, in infringement of the said letters patent, or any, or all of the claims thereof, without the license or consent of the plaintiff herein, and defendant further denies that it threatens to continue, or will continue, so to do, and defendant further denies that it is advertising, or ever has advertised, without the license or consent of plaintiff, device or devices for use and sale and/or sale, in infringement of any alleged rights, alleged to be secured to plaintiff herein by said letters patent No. 1,010,020; and defendant denies that it is distributing, or has caused to be distributed, directly or indi-

rectly, circulars or other advertising matter in which it pretends to be the owner of said device, alleged to be patented by said letters patent No. 1,010,020, or of any rights thereunder, in disregard or violation of any alleged rights of plaintiff herein; but on the contrary defendant's towers are of an entirely different design, construction and principle, and are built and sold under defendant's independent patents.

## VI.

Answering paragraph 6 of said bill of complaint, defendant denies that it was duly, or otherwise, notified by the plaintiff in writing, or otherwise, of defendant's said alleged act, or acts, of infringement, and denies that plaintiff has requested defendant to desist from any alleged further infringement of said alleged letters patent, or any of the claims thereof, and therefore, denies that defendant has ignored any such notices, or that he has directly or indirectly continued said infringement, or any infringement, of the rights of the plaintiff under said letters patent No. 1,010,020, or that he has infringed said alleged letters patent, or any of the [7] claims thereof, at any time or place, or in any manner whatsoever.

## VII.

And for further and separate defense, defendant alleges that by reason of the state of prior art existing at the time of said alleged invention by said Barton H. Coffey of the device, or devices, alleged to be patented in and by said alleged letters patent No. 1,010,020, the said device, or devices,

was not an invention and did not require an exercise of the inventive faculties for its production, and was not patentable, and for that reason said alleged letters patent No. 1,010,020, are null, void and of no effect.

### VIII.

And for a further and separate defense, defendant alleges that the said Barton H. Coffey was not the original or first or sole or any inventor or discoverer of the alleged invention, alleged to be patented in and by said letters patent No. 1,010,020, or any, or all, of the claims thereof, or of any material or substantial part thereof, but, prior to the alleged invention thereof by the said Barton H. Coffey, and more than two years prior to the filing of the application for said letters patent, the said alleged invention and every material and substantial part thereof, had been shown, described and patented in and by each of the following letters patent of the United States of America, and has been invented by each of the patentees named in each of said letters patent, and each of said patentees is the first and original inventor thereof, and, at all times, was using reasonable diligence in adapting and perfecting same, and the respective places of residence of said patentees are, as defendant is informed and believes, respectively set forth in said letters patent to wit:



No.	Date	Patentee
104,798	June 6, 1870	Vander Weyde
107,850	Oct. 4, 1870	Anderson
140,680	July 8, 1873	Cooper
278,986	June 5, 1883	Luck [8]
303,334	Aug. 12, 1884	Southwick
395,691	Jan. 8, 1889	Carlisle
430,881	June 24, 1890	Popper
444,558	Jan. 13, 1891	Klein
463,702	Nov. 24, 1891	Mills
477,755	June 28, 1892	Hanisch
503,395	Aug. 15, 1893	Wood et al
520,994	June 5, 1894	Kessler
544,204	Aug. 6, 1895	Andrews
594,440	Nov. 30, 1897	Stocker
621,718	Mar. 21, 1899	Seymour
649,573	May 15, 1900	Fischer et al
661,192	Nov. 6, 1900	Ostendorff
670,486	Mar. 26, 1901	Summers
683,933	Oct. 8, 1901	Halsall
693,625	Feb. 18, 1902	Schmidt
697,160	Apr. 8, 1902	Ostendorff
700,990	May 27, 1902	Stocker
710,857	Oct. 7, 1902	Griesser
736,087	Aug. 11, 1903	Graham
772,780	Oct. 18, 1904	Burhorn
808,050	Dec. 19, 1905	Hanswirth
821,561	May 22, 1906	Wheeler, et al
836,702	Nov. 27, 1906	Ostendorff
844,336	Feb. 19, 1907	Doherty
899,665	Sept. 29, 1908	Gould
927,766	July 13, 1909	Bauer

No.	Date.	Patentee.
961,100	June 14, 1910	Burhorn
902,875	Nov. 3, 1908	Hart
965,117	July 19, 1910	Morison
965,248	July 26, 1910	Steinbart
973,163	Oct. 18, 1910	Burhorn
984,660	Feb. 21, 1911	Hass
1,027,184	May 21, 1912	Coffey
	Filed Feb. 24, 1910 [9]	
1,040,875	Oct. 8, 1912	Burhorn
	Filed Feb. 6, 1911	

## FRENCH PATENT.

359,426	Mar. 26, 1906	Burdon
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## ENGLISH PATENTS.

16,664	Aug. 16, 1899	Overhoff
21,711	Sept. 23, 1909	Pownall
25,449	Nov. 12, 1906	Hebbo

—and in addition to the above listed prior patents, defendant believes that there are many others, of which it is not at this time advised, and prays leave to set same up in an amended answer at a later date, when the same become known to defendant.

## IX.

As a further, separate and special defense, defendant alleges as special matter that the alleged invention attempted to be patented by said letters patent No. 1,010,020, was described in various printed publications prior to the supposed invention or discovery thereof by said Barton H. Coffey, and more than two years prior to his application for letters patent therefor, but the

name of such publication, or publications, and the name, or names, and addresses of the respective publishers are unknown to defendant at this time, and defendant prays leave to set the same up by amendment to this answer at a later date, when the necessary information is obtained.

X.

And as a further, separate and special defense, the defendant alleges as special matter that the alleged invention, attempted to be patented in letters patent No. 1,010,020, and all of the subject matter thereof, were known to and in open, notorious, public use by others than the said Barton H. Coffey in the United States, prior to any alleged invention or discovery by the said Barton H. Coffey, and for more than two years prior to the application for patent by the said Barton H. Coffey by the several patentees mentioned in Paragraph VIII above and at the [10] places specified in their said respective patents, and by others whose names and addresses and the places of use of the said devices, are unknown to defendant at this time, but defendant prays leave to set the same up in an amendment at a later date when the necessary information is obtained.

XI.

And as a further, separate and special defense, defendant alleges as special matter that for the purpose of deceiving the public, the description and specification filed by the said Barton H. Coffey in the Patent Office in his application which eventuated in letters patent No. 1,010,020, was made to

contain less than the whole truth relative to his invention or discovery, or more than is necessary to produce the desired result; and further that the said alleged invention and the said alleged letters patent here in suit, and each and every claim thereof, is lacking in novelty or utility, or the quality of invention, and that said letters patent, and each of the claims thereof, are invalid in all respects.

## XII.

For a further, separate and special defense, defendant alleges that the devices made, used and sold by it, and which it believes to be the device charged in said bill of complaint to be an infringement of plaintiff's alleged letters patent, has been for many years last past made and sold by defendant, and that the said manufacture, use and sale of said devices was at all such times known to the plaintiff, but, prior to the commencement of this suit, plaintiff never notified defendant that said devices, or any of them, were claimed by plaintiff to be an infringement of any alleged letters patent owned by plaintiff, but plaintiff at all said times, with full knowledge of said manufacture, use and sale of said devices by defendant, remained silent and failed to assert their rights, if any, under said alleged letters patent No. 1,010-020; and by reason of plaintiff's said silence and failure to claim that said device infringed plaintiff's patent, and in reliance thereupon, [11] defendant manufactured, used and sold said devices and expended large sums of money in building up



a business in the manufacture, use and sale of said devices, in buying additional land and tools, erecting buildings, advertising and otherwise expanding its business, all with the full knowledge of but without protest from, or the assertion of any alleged claims or rights, by plaintiff; wherefore, defendant charges and alleges plaintiff is estopped from asserting or maintaining the alleged infringement of said letters patent sued on herein, and by reason of said facts, plaintiff has been guilty of laches in asserting any such alleged rights, and in alleging infringement of said letters patent, and in instituting this suit thereon.

SETOFF, COUNTERCLAIM AND CROSS-COMPLAINT.

CAUSE ONE.

And for a further and separate defense, and by way of setoff, counterclaim and cross-complaint against plaintiff herein, and praying for affirmative relief, defendant alleges as follows:

XIII.

That the defendant herein, under the name originally as Standard Engineering Company, was originally incorporated May 25th, 1909, and by due process of law said name was changed on November 1st, 1910, to Braun, Williams & Russell, Inc., and again on September 29th, 1911, was changed to C. F. Braun & Co., and as such has remained ever since and is so to-day; that defendant for several years last past and long prior to the filing of this suit was lawfully engaged in the business of manufacturing, among other things, Water Cooling Tow-

ers, and during a long course of honorable dealing had and has built up a large, successful and remunerative business in said structures in and throughout the State of California and elsewhere in the United States; that defendant's said product and the workmanship applied thereto has been of high quality and has met with general favor in the trade from purchasers, so that the defendant has acquired and enjoyed a high reputation and an established and profitable business and valuable goodwill [12] in respect of said product not only in this district but in various parts of California and elsewhere in the United States, and that save for the unlawful actions of said plaintiff herein complained of this defendant would still remain in the undisputed enjoyment of said business and reputation and goodwill.

#### XIV.

That the plaintiff has for several years last past made improper and unlawful use of its alleged ownership of various patents on Cooling Towers, including the patent in suit, and more recently, as defendant is informed and believes, made improper and unlawful use of the fact of bringing this suit against this defendant, all with the unlawful purpose of harassing, annoying, injuring and damaging plaintiff, its agents and customers, in its and their legitimate business aforesaid.

#### XV.

Defendant shows that the plaintiff, Cooling Tower Company, Inc., is a competitor of the defendant in the same business field covered by the

defendant in the sale and construction of Water Cooling Towers, and said plaintiff has and is unlawfully and maliciously misusing the said alleged ownership of the various patents, including said alleged letters patent No. 1,010,020, by malicious and untrue representations in an endeavor to secure the trade of the said defendant, and of its agents, and to injure the reputation, trade and goodwill of said defendant, and has succeeded therein to the great injury and damage of defendant and its legitimate business and goodwill and reputation.

## XVI.

That plaintiff, Cooling Tower Company, Inc., has written letters and otherwise represented to the customers and prospective customers and prospects of defendant herein, and who had either purchased or were anticipating the purchase of devices and products of defendant, unlawfully and maliciously alleging that the defendant was at one time agent of plaintiff; that defendant stole plaintiff's design; that defendant's [13] Towers were copies of plaintiff's designs; that defendant was infringing various and sundry patents of plaintiff, but at no time whatever, so far as defendant is informed, did plaintiff ever specify any particular patent or what particular feature or features constituted the alleged infringement; that various customers of defendant were, in fact, customers of plaintiff, whereas the contrary was true; that defendant had resorted to unfair means in getting business; that suit would be instituted against all users of defendant's product.

Defendant further shows that said representations were knowingly and maliciously false and constituted gross slander on the legitimate business of defendant and in some instances resulted in the alienation of some of defendant's customers and in lost sales, the amount of which cannot at this time be estimated without an accounting, but, as defendant is informed and believes, is in excess of fifty thousand (\$50,000.00) dollars; that this practice of writing letters and threatening customers and prospective customers of defendant by plaintiff has existed over a period of several years.

#### XVII.

That this defendant further shows, by facts within the knowledge of its officers and its attorneys and on information and belief, that as long ago as July, 1918, about the first day of July, 1918, said plaintiff addressed a letter to the Union Oil Company of California, one of defendant's customers, in which plaintiff said:

“We were just about to write you when your inquiry came in, as only a few days ago we received report from a Californian that the Union Oil Company of California was operating a tower supplied by Braun. We had Mr. Braun handle for us the California end of our negotiations in connection with the first towers we built for the Dutch Oil interests at their Shell Company Plant at Martinez, Calif., but our experience in that case did not justify our making him our representative, and later he



tried to procure additional business from the same people by using [14] our designs.

“We have straightened out the matter with the Dutch Oil interests, who have become very good customers and friends of ours, and we thought that Braun had discontinued his Prussian methods after this adventure, but the report that we received leads us to believe that in the case of your company and one other, he has been using his former connection with our company to procure business for cooling towers built on our patents.

“In order to protect our business, as well as the reputation of our towers, every one of which is operating in a highly satisfactory manner, we must, of course, take the matter up vigorously and would much prefer co-operating with you in determining whether the tower you purchased from Braun is an infringement or not, and then licensing you to continue the use of our various patents in connection with this installation, rather than to determine the question by suit against your company.”

That said letter was false and malicious and was known by plaintiff to be false and malicious; that as a matter of fact as early as the year 1915 defendant, as Erecting Engineers at that time, called for bids from several manufacturers of Cooling Towers, including Mitchell-Tappen Company, which defendant is informed, was the predecessor in interest of the plaintiff, and that the steel work for two towers was purchased by defendant from

the said Mitchell-Tappen Company and erected for the Shell Company; that never at any time did defendant represent the Mitchell-Tappen Company or this plaintiff, or hold itself out to represent said companies, or either of them, nor did defendant ever have any dealings with them, or either of them, other than for the steel work for the two towers aforesaid; that, as far as defendant is informed, neither the plaintiff nor the Mitchell-Tappen Company have ever at any time sold any [15] towers of any nature to the said Shell Company, at Martinez, California, or elsewhere; that, as defendant is informed and believes, plaintiff addressed a letter in words as follows, to wit, on July 11th, 1918, to Standard Oil Company, another of defendant's customers:

“We have yours of the 5th and shall be glad to avail ourselves of the co-operation your courtesy implies.

“We have been informed that the tower furnished by Mr. Braun is an infringement and of course do not wish to take either his word or the word of his attorney that the tower does not infringe our patents.

“Mr. Braun's attorney must know that the serial number he has given of an unissued patent is of no use to us as these matters are secret until the patent is issued, and we therefore can get no information from the Patent Office without his permission.

“Braun of course could make out application for patent which would be an exact counterpart of

ours and mark any device that he built 'Patent Applied for,' but such a procedure would not in any way relieve him or the parties to whom he sold the apparatus from responsibility.

"Mr. Braun might patent even a special bolt to be used in connection with our tower and in describing this bolt show in his patent papers our complete cooling tower showing all our patented parts, and while the patent would probably be allowed and issued it would only give him the right to these bolts, and although his patent described our towers thoroughly neither he nor the purchaser would be relieved of responsibility in case he did furnish such a tower without our consent.

"We would suggest that the easiest way for both you and ourselves to determine the matter would be for you to forward to us the plan of the tower which he has erected for you and by going over these plans we can determine the matter for ourselves. We will of course return the plans to you, and advise you as to our findings.

"If Mr. Braun wishes to furnish to you for our [16] inspection copies of his correspondence with the Patent Office in regard to serial number 212,410 we of course will be glad to go over same.

"We know from experience that co-operation in a matter of this kind saves both time and money for both parties, and desiring the goodwill of pros-

pective customers as well as their business, we remain

“Yours very truly,  
“THE COOLING TOWER COMPANY,  
INC.,  
“By (Signed) L. C. PHILLIPS,  
Treasurer.”

Copy.

FC.

That the statements therein charging or imputing improper conduct to defendant or its officers, or any of them, were and are wilfully false and malicious and were known to be such at the time the said letter was written by the said plaintiff.

That on July 18th, 1918, the following letter was addressed to the Cooling Tower Company by defendant's attorney;

“San Francisco, July 18th, 1918.

“Cooling Tower Company,

“90 West St.,

“New York City, New York.

“Gentlemen:

“As attorney for C. F. Braun & Company, of this city, my attention has been called to your misrepresentations that the Braun Cooling Tower in some way or another is in infringement of your patents, and to your threats of suit against the Braun Company's customers unless they see fit to take a license from you.

“Instead of acting in the legal way open to you (if you consider that your patents, or any of them, is or are being infringed) you have seen fit to



harass and attempt to intimidate my client's customers, which action on your part can only be characterized as unfair and legally indefensible. [17]

“These unfair tactics have been known to us for some time, but we have patiently borne your misrepresentations, feeling that they would in the end hurt you much more than they have hurt us. The time has come, however, when it is either necessary that you forthwith desist from resorting further to such discredited methods or that you bring an action for infringement as you may be advised in the premises.

“More particularly I have before me a copy of your scurrilous, not to say libellous, letter that you wrote under date of July 1st, 1918, to the Union Oil Company of California.

“As to the libellous and defamatory matter of your letter to the Union Oil Co., that is a personal question between Mr. Braun and you, and I am not advised what steps, if any, he may take by way of criminal prosecution.

“The present letter is to warn you against your unfair practices under the guise of your patents.

“Your course of procedure is particularly reprehensible as you have not seen fit to adopt the more regular and usual mode of communicating your grievance to the one primarily responsible, i. e. the manufacturer, but, on the contrary, you have sought the irregular method of mischievously interfering with the manufacturer's trade in an attempt to destroy a rival's business by endeavoring to sow

the seeds of dissension and suspicion among the trade. You must well be aware of what the courts have had frequent occasion to say in regard to such practices.

“The patents to which I assume you refer are the following:

“ #1,010,020, Nov. 28th, 1911, Device for Cooling Liquids,

“ #1,027,184, May 21st, 1912, Cooling Tower,

“ #1,158,107, Oct. 26th, 1915, Cooling Tower. [18]

“With respect to your charge of infringement, I have only to say that if your complaint is made in good faith, it displays an unpardonable ignorance both on what C. F. Braun & Company is doing and of the claims of the Coffey patents. If this charge of infringement is not made in good faith, then you are guilty of unfair dealing.

“Assuming that your charge of infringement has been made inadvertently and without a full and proper investigation, I have only to say that I have carefully examined into the claims of each of your patents above mentioned and compared them with the structure of the Braun Company and have reported to Mr. Braun that your charge of infringement is without any basis in fact.

“I beg now to advise you that C. F. Braun & Company does not propose to submit to the tactics to which you are resorting in your attempts to secure business, and we shall hold you strictly accountable for any damages that may result or have resulted from your method of pursuing my client’s patrons.

“If you are honest in your belief that my clients

are invading upon whatever patent rights you have, your counsel will doubtless inform you as to the proper course to pursue in order to protect your alleged rights.

“Failing a discontinuance of your unlawful methods, we shall seek relief in the courts for damages as well as an injunction.

“You will please be guided accordingly.

“Yours truly,

“(Signed) CHAS. E. TOWNSEND.

Attorney for C. F. BRAUN & COMPANY.”

CET:C.

That in reply thereto the following letter was received from Andrew Foulds, Jr., as attorney for the plaintiff:

“Fifteen John Street,

“New York City.

“July 30, 1918.

“Messrs. Dewey, Strong & Townsend, [19]

“911-916 Crocker Building,

“San Francisco, Cal.

“Gentlemen:

“The Cooling Tower Company of this City have handed to me for reply your letter to them of the 18th instant, relative to C. F. Braun & Co. You are apparently misinformed as to the conditions. From the information at hand it appears that your clients have used cuts of the Cooling Tower Company towers in their literature and have in other ways unfairly taken advantage of the reputation of the Cooling Tower Co.



“We have been informed that your clients have infringed the patents of the Cooling Tower Company, and are only awaiting definite proof before bringing suit. The considerable distance which separates our two cities has made it difficult to learn the facts, which is the only reason for the delay.

“If our information is correct C. F. Braun & Co. or someone connected with them has actually enlarged one of the Cooling Tower Co. towers by using its plans for the purpose and the natural assumption is that the same thing has been and will be done elsewhere.

“I assume that your letter was written in good faith and therefore request that you furnish me with drawings and specifications of the towers erected, in order that I may satisfy myself on the question of infringement and also inform me whether Braun or his company have used the Cooling Tower Co. plans in construction work.

“I am satisfied that the Cooling Tower Company have been entirely within their rights in their correspondence, and I am unable to discover anything upon which you base your inferences of any unfairness on their part.

“Your prompt attention to this matter will be appreciated.

“Yours truly,

(Signed) “ANDREW FOULDS, Jr.

AF:IF.

That in answer thereto Counsel for defendant replied [20] as follows:

“August 28th, 1918.

“Messrs. Ashley, Foulds & Galland,

“15 John St.,

“New York City, New York.

“Gentlemen:

“Re-cooling Tower Co.—C. F. Braun & Co.

“Delay in answering your favor of July 30th, 1918, has been due, first, to the fact that I have been absent from the city, and, second, a desire to inquire further into the matters raised by your letter.

“The information now before me, and particularly the frank acknowledgment in the second and fourth paragraphs of your letter to the effect that the Cooling Tower Co. and your good selves are still lacking definite proof as to alleged infringement, confirms the views previously expressed in my letter of July 18th, 1918, to the Cooling Tower Company, and there appear no good reasons for withdrawing any of the statements made at that time of our intention to protect ourselves against the questionable practices of the Cooling Tower Company.

“Naturally C. F. Braun & Co. does not desire to engage in litigation any more than any other reputable concern, but if it is necessary to test out the question of alleged infringement, the sooner such suit is instituted and determined the better; and the Braun Co. will cheerfully co-operate in obtaining an early hearing and settlement of the matter. But before any suit is brought, we would suggest that you ascertain the true facts not only in regard to what the Braun Co. is actually doing but

the true facts in regard to the past relations between the parties.

“It is not true that the Braun Co. has either copied the Cooling Tower Company’s literature or otherwise acted unfairly. Some three years ago they erected two Cooling Towers under a proper and well understood arrangement with the predecessors of your client. These towers were illustrated in [21] some of the literature of the Braun Co. as showing specific instances of engineering work actually constructed by the Braun Co. (You understand, of course, that neither the Cooling Tower Co. nor the Mitchell-Tappen Company had anything to do with the actual building of these towers or getting the order for the towers.)

“The cuts of these towers, with others built by the Braun Co., were simply to illustrate the Braun Co.’s ability for constructing large work of this kind. Those particular towers were never claimed to be Braun towers. The Braun Co. considered that in showing the cuts of work actually executed by them that they were entirely within their rights. The use of the bulletin in which these cuts appeared was discontinued more than a year ago, so that if your client ever had any cause for complaint, they are rather late in asserting it. Manifestly, you will agree with me that it was hardly a square thing for them to express their disapproval of whatever they thought the Braun Co. was doing or had done in the past by offensive circumlocution.

“Furthermore, I am authorized to state on behalf of Mr. Braun’s company that the Braun Co. has

never used any plans of the Cooling Tower Company at any time, except in connection with the contract for the two towers erected three years ago under the circumstances previously referred to in this letter.

“As I view the situation, it is simply a case of a disgruntled competitor trying to get even without much regard to the methods employed. It is, therefore, with the fullest confidence that I state that the charge of infringement, if made in good faith by the Cooling Tower Company, is frivolous and I am convinced that upon looking into the matter and learning the true facts in regard to the situation you will be of the same opinion.

“As far as the Braun Co. is concerned the Cooling Tower Company’s patents possess only a nuisance value. The Braun Co. has invested large sums of money in developing its own line of specialized towers, it is proceeding in good faith, and it is [22] in the business to stay.

“I therefore, repeat that, if it is the Cooling Tower Company’s intention to bring suit, they act promptly in the matter with a view of early determining the legal rights and liabilities of the respective parties under the circumstances.

“Yours very truly,

“(Signed) CHAS. E. TOWNSEND,  
“Attorney for C. F. BRAUN & CO.”

CET:C.

That further the plaintiff did not reply nor did plaintiff bring suit, but on the contrary, as defend-



ant is informed and believes, numerous and other letters were sent out by plaintiff similar to the letters aforesaid to the Union Oil Company and Standard Oil Company; and that notwithstanding said correspondence passing between the attorneys for plaintiff and defendant and the invitation on behalf of defendant to effect an early determination of the legal rights and liabilities of the respective parties under the circumstances, the said plaintiff, Cooling Tower Company, Inc., continued to write letters and to harass, annoy and attempt to intimidate and to intimidate customers and prospective customers of defendant herein.

#### XVIII.

That the plaintiff, Cooling Tower Company, Inc., well knew that a suit brought directly against this defendant, C. F. Braun & Co., would settle once and for all any legal or equitable differences between plaintiff and this defendant, and of all the customers and other prospective customers of defendant, and knew further that the burden of defending all suits brought against any of defendant's customers or prospective customers primarily and essentially rested upon this defendant.

#### XIX.

Nevertheless, the defendant shows that notwithstanding these facts, plaintiff has been and is endeavoring to break up and to destroy the business of this defendant, and to drive the said defendant out of the field of manufacturing Water Cooling Towers, and to prevent the sale of said manufactured [23] article by this defendant within this

district, and elsewhere, by its campaign of malicious and untruthful representations as to the alleged ownership of so-called basic patents by the plaintiff of its alleged infringement by this defendant and by other misrepresentations against this defendant, as aforesaid; that on information and belief said plaintiff, by advertisements and otherwise, has given great publicity to the bringing of this suit and has sent out threatening communications, both oral and written, to the customers and prospective customers and agents of this defendant, making unjust and untrue charges against this defendant, and misrepresenting the character and nature of the Water Cooling Towers manufactured by it, and representing that the same is in violation of certain letters patent; but said plaintiff has failed to specify which of the claims of said patent alleged to be infringed was, or are claimed to be, infringed, and has failed to set out the nature of the claims, or otherwise to inform the trade or the public in what respects defendant's device was, or is an infringement, if at all, whereas, in truth and in fact the device manufactured and sold by this defendant, and by its agents and customers, is in no way similar to, or like that upon which plaintiff owns, or claims to own, patent rights, and as a matter of fact, the said Coffey patent No. 1,010,020 sued on covers and claims a device in which the strips or drip bars of the decks, between which the water drips in the process of cooling, are specifically limited to being "separately fastened" and "loosely splined together" and by no reasonable construction could

the claims of said patent be read upon the device made, used and/or sold by defendant herein; nevertheless, plaintiff, and its attorneys, have sent out, and are continuing now to send out threatening letters and communications to customers and prospective customers of this defendant, and of its agents, threatening them with litigation, and with claims for damages, and other dire consequences, if they buy or sell, or use the device manufactured by this defendant; and that if these customers or prospective customers of the defendant attempted to buy or install any [24] Water Cooling Towers made by defendant, that it, plaintiff, would bring suit against said purchasers or users, and intimating that this Court would grant an injunction against such use of said devices; that plaintiff has sought to intimidate, and have intimidated in many instances prospective customers of the defendant by plaintiff's reckless threats and intimation of wholesale and indiscriminate litigation, and as defendant is informed and believes the otherwise libelous, malicious and untrue statements concerning defendant and its officers and business, and in some instances defendant and its agents have lost the sale that defendant, or its agents, would otherwise have legitimately made.

## XX.

That the business and goodwill of this defendant in manufacturing and marketing the said Water Cooling Towers is an important, valuable and profitable business as plaintiff well knows; that plaintiff by threatening litigation as aforesaid is harassing de-



defendant and paralyzing defendant's legitimate business, not only in cooling towers but in its other products; that by so doing plaintiff is throwing the financial burden of litigation upon defendant, and otherwise by its unlawful acts aforesaid is causing defendant serious financial loss, and loss of business and injury to its reputation and goodwill; and if allowed to continue for even a short time will cause this defendant great and irreparable injury in carrying on its lawful business, for the reason that its production and number of sales are relatively small because the nature of the device restricts it to a limited number of large concerns which need a device of this nature, and the loss of a few customers would result and has resulted in irreparable injury, because where the needs of a customer are satisfied he will not and does not need additional equipment of this nature for many years; it being common knowledge that when one of these devices is installed it lasts for a very long time and does not require replacement for many years, and that, [25] therefore, when plaintiff by its unfair methods as set forth above deprives defendant of a sale of such a device, it means that every prospective customer thusly intimidated is permanently removed from the list of prospective purchasers of defendant's device; and such unfair, unjust and unwarranted acts by plaintiff greatly injure and impair the salability of the defendant's said Water Cooling Towers, and injure and impair the reputation of this defendant, especially in view of the fact, as defendant is informed and believes, plaintiff takes

advantage of the situation thus created publicly and extensively to advertise the facts of this suit against the defendant's device, and all without just or any cause.

### XXI.

That this suit brought against this defendant will determine the rights of the plaintiff and defendant under said letters patent No. 1,010,020; that there is no point at issue, or to be brought to issue in connection with defendant's manufacture, use and sale of said Water Cooling Towers or their use by customers and prospective customers of defendant that cannot be fully litigated in this action; that should the plaintiff prevail in this action it can stop the further manufacture of this device by this defendant, and thus accomplish in one action all that the threatened additional actions would accomplish for it, and this defendant stands ready and willing to bring the above-entitled cause on for trial at the first open date in the above-entitled court without unnecessary delay, so that this matter may be quickly settled and the rights of the various parties fully determined.

### XXII.

Defendant shows that it has not committed any wrongful, unlawful or unfair act in respect to the premises at any time against the plaintiff; and that plaintiff has not come into court with clean hands.

### XXIII.

That the acts of the plaintiff herein complained of [26] have not been done or made in good faith

but maliciously and without just or reasonable cause and solely for the purpose of harassing and injuring and causing, and has caused, irreparable injury to this defendant, and to destroy its business and reputation and goodwill, in an attempt to obtain a monopoly on behalf of plaintiff, to which the said plaintiff is not rightfully entitled; that said acts of the plaintiff have been done or made wilfully, maliciously, falsely and fraudulently and by so doing plaintiff has been guilty of unfair competition against this defendant, and has libeled, slandered, and damaged the property rights of this defendant, and threatens to continue so to do, and defendant believes plaintiff will continue so to do unless restrained by this Honorable Court.

#### XXIV.

Defendant further shows that unless the plaintiff be restrained from bringing other suits in this district and elsewhere against defendant's agents and customers, and from continuing its unfair course of threats and harassment as above set forth, immediate and irreparable injury, and further loss and damage will result to this defendant before this case can come to final hearing and determination, in that by reason of the nature of the Water Cooling Tower device manufactured by defendant and which is believed by defendant to be the device which is alleged to infringe letters patent No. 1,010,020, the number of possible customers is extremely limited.

#### XXV.

That defendant by reason of the acts of the plaintiff herein complained of has suffered great and

irreparable damage from the said plaintiff, the amount of which defendant cannot state, but is in excess of the sum of fifty thousand (\$50,000.00) dollars. [27]

#### COUNTERCLAIM—CAUSE 2.

And as a further setoff, counterclaim and cross-complaint, and as being a cause of complaint which might be the subject of an independent suit in Equity by this defendant, C. F. Braun & Co., against plaintiff herein, Cooling Tower Company, Inc., defendant alleges:

#### XXVI.

That prior to the 18th day of January, 1918, one Carl F. Braun was the original, first and sole inventor of a certain new and useful invention entitled "Water Cooling Tower," and did upon said date file in the Patent Office of the United States an application for letters patent for said invention.

#### XXVII.

That thereafter, to wit, on the 23d day of March, 1920, letters patent for said invention No. 1,334,515 were granted, issued and delivered by the Government of the United States unto the said Carl F. Braun, in the name of the United States of America and signed by the Commissioner of Patents of the United States, whereby there was granted to the said Carl F. Braun, his heirs or assigns, the sole and exclusive right to make, use and vend the said invention throughout the United States of America and the territories thereof for a period of seventeen (17) years from the 23d day of March, 1920; and



that prior to the issuance of said letters patent all proceedings were had and taken which were required by law to be had and taken prior to the issuance of letters patent for new and useful inventions; and that a more particular description of the invention so patented will appear in and by the said letters patent, which are ready in court to be produced by the defendant, and profert is hereby made thereof.

XXVIII.

That prior to the 28th day of April, 1920, one Carl F. Braun was the original, first and sole inventor of a certain [28] new and useful invention entitled "Water Cooling Tower" and did upon said date file in the Patent Office of the United States an application for letters patent for said invention.

XXIX.

That thereafter, to wit, on the 16th day of January, 1923, letters patent for said invention No. 1,442,784 were granted, issued and delivered by the Government of the United States unto the said Carl F. Braun, in the name of the United States of America and signed by the Commissioner of Patents of the United States, whereby there was granted to the said Carl F. Braun, his heirs or assigns, the sole and exclusive right to make, use and vend the said invention throughout the United States of America and the territories thereof for a period of seventeen (17) years from the 16th day of January, 1923; and that prior to the issuance of said letters patent all proceedings were had and taken which were required by law to be had and taken prior to



the issuance of letters patent for new and useful inventions; and that a more particular description of the invention so patented will appear in and by the said letters patent, which are ready in court to be produced by the plaintiff, and profert is hereby made thereof.

### XXX.

That said Carl F. Braun, by an instrument in writing, duly sold, assigned and transferred unto the defendant herein, all right, title and interest in and to said Braun letters patent No. 1,334,515 and No. 1,442,784, and each of them, together with all rights of action and claims for damages and profits accrued or accruing since the issuance of said letters patent, and each of them, and that the defendant herein is the sole and exclusive owner of all the right, title and interest in and to the said inventions and the respective letters patent therefor aforesaid and is solely entitled to bring and maintain this setoff, counterclaim and cross-complaint. [29]

### XXXI.

That prior to and since the issuance of said respective letters patent and the assignments of same as aforesaid, defendant herein, C. F. Braun & Co., has gone to great expense and made great efforts to introduce the said Water Cooling Towers to the public and has created a favorable impression thereof with the trade and has spent large sums of money in developing plant and equipment for the manufacture of same and has spent years of time in the development of a substantial and lucrative busi-

ness, and except for the infringements by plaintiff herein complained of, the defendant herein has enjoyed the monopoly granted by said respective letters patent and the public generally has acquiesced therein; and since the grant of said respective letters patent, the defendant herein has given notice to the public that the same were patented by affixing to said manufactured Water Cooling Towers the word "Patented," together with the day and year in which the said respective letters patent were granted.

### *XXII.*

That the plaintiff herein, well knowing the premises and the rights secured to defendant herein, and since the issuance of said respective letters patent as aforesaid and within the six (6) years last past, and within the Southern Division of the Northern Judicial District of California and within the jurisdiction of this court, and elsewhere within the United States, did, without the license or consent of defendant herein and in infringement of the aforesaid respective letters patent and of the claims thereof, and each of them, and in violation of defendant's rights thereunder, practice and use the said invention by the manufacture, sale and use of devices made according to the said respective letters patent and described and claimed in the said respective letters patent, and in violation of each and all of the claims thereof, and threatens to continue the said infringement; and by reason of the said infringement the plaintiff, Cooling Tower Company, [30] Inc., has realized large profits and defendant, C. F.

Braun & Co., has suffered large damages, but the amount of such profits and damages is unknown to defendant and can be ascertained only by an accounting.

### XXIII.

That plaintiff herein threatens to continue indefinitely the said infringement herein complained of, and unless restrained therefrom by this Court will continue the same, whereby defendant will suffer great and irreparable damage for which there is no plain, speedy or adequate remedy at law.

WHEREFORE, defendant prays a decree of this Court as follows:

First. That the bill of complaint filed by plaintiff herein shall be dismissed.

Second. That a writ of injunction, provisional during the pendency of this suit as well as permanent, shall issue out of this court, enjoining and restraining the plaintiff, its officers, directors, clerks, attorneys, servants, agents and employees from issuing letters or advertisements, or publishing statements in any form whatsoever, either written or oral, claiming that defendant's Water Cooling Tower devices infringe said alleged letters patent No. 1,010,020 or any other letters patent of plaintiff, and from sending circulars or letters to any customer, representative, or prospective customer, or prospect of this defendant, threatening such person or persons with litigation or prosecution, or with the costs and expenses of litigation, or otherwise publishing statements, either written or oral, intended or by reasonable construction likely

or apt to cause injury or damage to this defendant in the business of manufacture, use and/or sale of said Water Cooling Towers.

Third. That the Court will in rendering said decree for an injunction against said unfair competition of the plaintiff, and improper use of the alleged ownership of the said Coffey Patent in suit No. 1,010,020, assess, or cause to be assessed against this plaintiff the damages which defendant has sustained by [31] reason of such unlawful and unfair acts of the plaintiff, as recited herein, and also the profits which have accrued to the plaintiff by reason of its unlawful acts, as aforesaid.

Fourth. That the Court will increase the amount of said damages by reason of plaintiff's willful, malicious and oppressive interference with the defendant's rights.

Fifth. That upon the filing of this setoff, counterclaim and cross-complaint a preliminary injunction be granted enjoining and restraining plaintiff, its officers, directors, clerks, attorneys, agents, servants and employees, *pendente lite*, either directly or indirectly, from making, using or selling any device or devices which infringe upon said respective letters patent No. 1,334,515 and No. 1,442,784, or either of them, or from contributing to any such infringement.

Sixth. That upon final hearing said plaintiff, its officers, directors, clerks, attorneys, agents servants and employees be permanently and finally enjoined and restrained from either directly or indirectly making, using or selling any device or de-



VICES which infringe upon said respective letters patent No. 1,334,515 and No. 1,442,784, or either of them, or from contributing to any such infringement.

SEVENTH. That the defendant have and recover from the plaintiff the profits realized by the said plaintiff and the damages sustained by the defendant from and by reason of the infringement aforesaid, and that because of the vicious and malicious manner of the infringement, and the unfair practices adopted by plaintiff in connection with such infringement that such damages be trebled.

EIGHTH. That the defendant be awarded and decreed to recover from plaintiff its costs and disbursements in this suit and such other and further relief as to the Court may seem proper and in accordance with good conscience.

C. F. BRAUN & CO.

By CHAS. E. TOWNSEND,

Its Attorney.

CHAS. E. TOWNSEND,

WM. A. LOFTUS,

WM. S. GRAHAM,

Solicitors and Counsel for Defendant.

[32]

United States of America,  
Northern District of California,  
City and County of San Francisco,—ss.

Carl F. Braun, being duly sworn, deposes and says that he is president of C. F. Braun & Co., defendant in the within entitled action; that he has read the foregoing answer and counterclaim and



knows the contents thereof; that the same is true of his own knowledge, except as to the matters which are therein stated on information or belief, and as to those matters, that he believes them to be true.

CARL F. BRAUN.

Subscribed and sworn to before me this 10th day of February, 1923.

[Seal]

W. W. HEALEY,

Notary Public in and for the City and County of San Francisco, State of California.

Receipt of a copy of the within answer admitted this 20th day of February, A. D. 1923.

EDWARD A. O'BRIEN,

Atty. for Plff.

[Endorsed]: Filed Feb. 20, 1923. Walter B. Maling, Clerk. By J. A. Schaertzer, Deputy Clerk.

[33]

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In the Southern Division of the United States District Court for the Northern District of California, Second Division.

IN EQUITY—No. 923.

COOLING TOWER COMPANY, INC. (a Corporation),

Plaintiff,

vs.

C. F. BRAUN & CO. (a Corporation),

Defendant.

## REPLY OF PLAINTIFF.

Cooling Tower Company, Inc., the plaintiff above named, for its reply to the answer of the defendant, C. F. Braun & Co., above named, admits, denies and alleges as follows:

## REPLY TO SETOFF, COUNTERCLAIM AND CROSS-COMPLAINT—CAUSE ONE.

1. It is without knowledge of the several allegations in paragraph numbered XIII of the answer and therefore leaves defendant to make such proof thereof as it may be advised, and it denies that it has in any manner or form been guilty of any unlawful acts.

2. Replying to paragraph numbered XIV of the answer, plaintiff denies that it has, at any time, made any improper or unlawful use of its ownership of any patents or of the patent in suit and denies that it has made any improper or unlawful use of this suit or of the fact of bringing the same, or that it has, in any manner, harassed, annoyed, injured or damaged the defendant or its agents or customers in their business or otherwise and it denies all of the [34] allegations contained in said paragraph.

3. In reply to paragraph numbered XV of the answer, plaintiff admits that it is engaged in the sale and construction of water cooling towers and that the defendant is a competitor in the said business field and plaintiff denies that it is now or has at any other time, unlawfully, maliciously or improperly, misused its ownership of any patents or

of the letters patent in suit, No. 1,010,020 and it denies that it has made any malicious or untrue representations in any way or that it has endeavored improperly to secure any trade of the defendant or of the defendant's agents or to injure the reputation, trade or goodwill of the defendant and it denies that it has committed any acts to the injury or damage of defendant or of its business, goodwill or reputation, and it denies all of the allegations contained in said paragraph.

4. In reply to paragraph numbered XVI of the answer, it denies that it has written letters or otherwise made representations to any customer, prospective customers or prospects of the defendant other than lawfully and in the regular course of business and it denies that it has unlawfully or maliciously alleged that the defendant was, at one time, its agent or that the defendant stole the plaintiff's design but alleges the facts to be that the defendant did, at one time, act as agent of plaintiff and its predecessor and that the defendant did unlawfully and maliciously appropriate and use the design and style of cooling tower originated and used by the plaintiff and it admits that it has alleged that the alleged towers of the defendant were simulations of the designs and towers of plaintiff and its predecessor and it admits that it has, in the course of business, alleged that [35] defendant was infringing certain patent rights of the plaintiff and it alleges that the statements so made by plaintiff, were and are true, and it admits and alleges that various users of Cooling Towers asserted by the

defendant to be its customers, were the customers of the plaintiff and it alleges that it advertised its Cooling Towers throughout the United States and alleges that all of its acts and doings in the premises were lawful and proper and it alleges that the defendant has resorted to unfair means in getting business, to wit, in that the defendant did, in circulars, literature and otherwise, use and publish the designs of the plaintiff and its predecessor and did falsely and fraudulently claim and assert that the said designs of the plaintiff and its predecessor were the designs of the defendant and it admits that it has threatened to institute suits against users of Cooling Towers and other devices which infringe the patent rights of the plaintiff and that it lawfully and by proper means, has, at all times, endeavored to protect its rights in the premises and it denies that any representations made by it were false or that the same constituted a slander on the business of defendant and denies that any damage or injury resulted to the defendant, except such damage as resulted from the natural and proper business competition of plaintiff and its predecessor and it denies that it has, in any way, unlawfully damaged or injured defendant or its business.

5. Replying to paragraph numbered XVII of the answer, plaintiff admits that on or about the first day of July, 1918, it sent a letter to Union Oil Company, a fragment of which is substantially quoted in said paragraph, but it denies that the said Union Oil Company was a customer of [36] defendant and prays leave to produce the whole of the



said letter before this Court, and it denies that the said letter was false or malicious or that it was so known to be; it is without knowledge as to whether the defendant, as early as the year 1915, called for bids from other manufacturers, but it admits and alleges that in or about the year 1915, and prior thereto, the defendant applied to the predecessor of plaintiff, the Mitchell-Tappen Company for local agency for the sale of products of the said Mitchell-Tappen Company and it admits that two Cooling Towers of the said Mitchell-Tappen Company were erected for the Shell Company and alleges that at said time, the said defendant was acting as sales agent for the said Mitchell-Tappen Company and that the said Shell Company applied to the Mitchell-Tappen Company for prices and estimates relative to the said towers prior to taking the matter up with the defendant and it alleges the fact to be that the defendant did, at that time, to wit, in the year 1915, or thereabouts and prior thereto, represent the said Mitchell-Tappen Company as its local sales representative in the State of California and it denies that the defendant did not have any dealings with the said Mitchell-Tappen Company other than for the steel work for the towers aforesaid and alleges the facts to be that the defendant, at said time, had dealings with the said Mitchell-Tappen Company relative to the sales agency for said Cooling Towers and that the prospective customers in said territory were, at said time, referred by the Mitchell-Tappen Company to the defendant and defendant alleges that the said Mitchell-Tappen Company,



through the said defendant, did, in or about the year 1915, sell two Cooling Towers to the said Shell Company and it admits that on or about July 11, 1918, it wrote a letter to Standard Oil Company, a part of which is quoted [37] substantially in the said paragraph, but it is without knowledge as to whether said Standard Oil Company then was a customer of defendant and leaves the defendant to make such proof thereof as it may be advised, and it denies that any statements contained in the said letter were or are false, malicious or untrue or that they were so known to be by the plaintiff and alleges that the facts stated in the said letter were and are true.

It admits that on or about July 18, 1918, a letter substantially as quoted in the said paragraph was received by it from one Charles E. Townsend purporting to be the attorney for the defendant and it admits that in answer thereto, a letter dated July 30, 1918, substantially in the form quoted in the said paragraph was sent to Dewey, Strong and Townsend of San Francisco and it admits that a letter dated August 28, 1918, substantially as quoted in the said paragraph, was sent by said Charles E. Townsend, purporting to be the attorney for the defendant and it denies that no reply to said letter was sent and alleges the fact to be that a reply was sent to said letter and was received by the said attorney for the defendant, as plaintiff verily believes, and it admits that no suit was brought at that time for the reason that defendant, though requested so to do, refused to give plaintiff

information as to its acts and plaintiff was unable to obtain the definite information relating thereto, and it denies that it did, in any manner, unlawfully harass, annoy or attempt to intimidate any customers or prospective customers of defendant herein, and except as herein expressly admitted, plaintiff denies the allegations in said paragraph.

6. Replying to paragraph numbered XVIII of the [38] answer, plaintiff denies that it had knowledge that a suit, then brought against defendant, would settle any legal or equitable questions of difference and denies that it knew that the burden of defending any suit brought against a customer of defendant would be undertaken by the defendant and it alleges the fact to be that it believed at that time and still believes that the defendant would, by unlawful and dilatory tactics, attempt to conceal the true facts and would by reason of the distance separating the parties geographically, put the plaintiff to great expense and annoyance in the prosecution of the said suit and the said belief was based upon the refusal of the defendant to give the plaintiff information as to the infringing devices manufactured or sold by it and the unlawful and malicious appropriation by the defendant of the business of the plaintiff and its predecessor and of the plaintiff's Cooling Towers and of photographs and cuts thereof, and it denies the allegations contained in paragraph numbered XVIII.

7. Replying to paragraph numbered XIX of the answer, plaintiff denies that it has, at any

time, endeavored to break up or destroy the lawful business of the defendant or to drive the defendant out of any lawful business or to drive the defendant out of the field of manufacturing water cooling towers or to prevent the sale, by the defendant, of any lawful devices, but alleges that it has endeavored to prevent the defendant from unlawfully and wrongfully appropriating the designs and business of the plaintiff and it denies that it has, in any manner, made use of any malicious or untruthful representations or statements as to the ownership of any patents by it or of the infringement thereof by defendant or that it has made any misrepresentations against the [39] defendant as alleged in the said answer or otherwise and alleges the fact to be, that all of its statements or representations in the premises have been and are true and it denies that it has, in any manner, given unlawful or improper publicity to the bringing of this suit or the fact of this suit and denies that it has, in any manner, unlawfully threatened any persons, either customers, prospective customers, or agents of defendant or otherwise, except such proper warning notices as may have been lawfully sent out in connection with the prosecution of the plaintiff's lawful business and it denies that it has made any unjust or untrue charges against the defendant or that it has misrepresented the character or nature or otherwise of any Cooling Towers manufactured by it or otherwise, but it admits that it has alleged and does now allege that the manufacture or sale of the pretended Cooling

Towers of the defendant constituted and do constitute a violation of the patent rights of the plaintiff, and it denies that it has, in any manner, concealed any of its claims whatever, but alleges that it has given the same as full and complete publicity as was lawful and proper in connection with the prosecution of its business and it denies that the device manufactured and sold by the defendant and its agents and used by its customers is not similar to or like the devices of plaintiff and alleges the fact to be that the devices of the defendant are simulations and copies of the devices originated by the plaintiff and its predecessor and it denies that the scope and nature of the plaintiff's patent No. 1,010,020 is properly, correctly or truly set forth in the said paragraph and begs leave to refer to the said letters patent or a duly certified copy thereof here in Court to be produced and it alleges that the devices of the defendant constitute an infringement of the plaintiff's [40] said letters patent and it denies that it has, in any manner, unlawfully sent out letters, communications or notices relative to its rights under said letters patent and alleges that all of the letters, communications and notices issued by it, have been lawful and proper and alleges the fact to be that it intends, in good faith, to prosecute, promptly and diligently, all infringements of the said letters patent and of any and all letters patent owned by it and it admits that it has notified users of Cooling Towers of its rights and intentions in the premises and it admits and alleges the fact to be that it verily



believes that this Court will grant injunctions restraining the unlawful use, manufacture or sale of infringements of its patents, and it admits that it has so stated to users of Cooling Towers and devices and it denies that it has, in any manner, sought to improperly or unlawfully intimidate any customers of the defendant and it denies that it has made any unlawful or improper threats or that it has ever threatened or intimated an intention to prosecute, wholesale, indiscriminate or, improper litigation in connection with its said patents or otherwise and except as herein expressly omitted, all the allegations in said paragraph are denied.

8. In reply to paragraph numbered XX of the answer, plaintiff is without knowledge as to the value or importance of the defendant's business or whether the same is profitable to the defendant, but verily believes that the profits and business unlawfully obtained by the defendant by the infringement of the plaintiff's patent rights and the copying of the plaintiff's designs has been profitable to the defendant and has greatly injured the plaintiff, and it denies that it has, in any manner, improperly injured or damaged the [41] defendant's legitimate business, and denies that it is, in any manner, causing defendant any loss of any nature, except that it is endeavoring to obtain from the defendant the profits unlawfully obtained by it from the manufacture, use and sale of the plaintiff's devices and denies that the plaintiff's acts will constitute or cause any loss or damage



to the defendant improperly, but alleges the fact to be that the defendant will be, as a result thereof, merely deprived of the unlawful, improper and illegal gains made by it from the infringement of the plaintiff's patent and the infringements of plaintiff's rights, and it denies that it has been guilty of any unfair, unjust or unlawful acts and alleges the fact to be that all of the acts of plaintiff have been lawful and it denies that it has improperly advertised or made use of the facts of this suit and it denies all of the allegations in said paragraph.

9. In reply to paragraph numbered XXI of the answer, plaintiff admits that it believes that this suit will establish the rights of the plaintiff under its said letters patent No. 1,010,020 and will convict the defendant of infringement thereof and it is without knowledge as to whether there is any point at issue or to be brought in issue in connection with the defendant's manufacture, use and sale of said Cooling Towers or their use by customers and prospective customers of defendant that cannot be fully determined in this action and it alleges that it desires to fully litigate the said matter and to enforce its claims and rights against the defendant and it admits that if it prevails in this action, it will stop the further manufacture of infringing devices by the defendant. [42]

10. Replying to paragraph numbered XXII of the answer, it denies the allegations contained in the said paragraph and alleges the fact to be that the defendant has, as herein set forth, committed

wrongful, unlawful and unfair acts in its competition with the plaintiff and alleges that the plaintiff has not been guilty of any unlawful or improper acts on its part.

11. Replying to paragraph numbered XXIII of the answer, the plaintiff denies that its acts have not been done or made in good faith and alleges that it has, in good faith, and fairly and with proper and reasonable cause, done all acts in the premises and denies that it has, in any manner, improperly harassed or injured or that it is causing or has caused any injury unlawfully to the defendant or that it has done any act or thing tending to destroy the business of the defendant or its reputation or goodwill unlawfully, and alleges that any injury or damage to the reputation or goodwill of the defendant will result solely from the defendant's own unlawful, malicious and fraudulent acts as herein set forth and its infringement of the plaintiff's rights and it denies that it has, in any manner, attempted to unlawfully obtain a monopoly to which it is not rightfully and lawfully entitled and denies that it has been guilty of any wilful, malicious, false or fraudulent act as alleged in the said paragraph or otherwise and it denies that it has been guilty of unfair competition against the defendant and it denies that it has libelled, slandered or damaged the rights of the defendant or that it threatens to continue so to do and alleges the fact to be that the defendant has wilfully, maliciously, falsely and fraudulently conducted and carried on a course of unfair com-

petition in an unlawful, wicked and [43] malicious intent to obtain the business of the plaintiff and to unfairly compete with the plaintiff.

12. Replying to paragraphs numbered XXIV and XXV of the answer, the plaintiff herein denies the same.

For a separate defense to the Cause One of the alleged setoff, counterclaim and cross-complaint contained in the answer of the defendant, plaintiff alleges:

13. That in the year 1914 and for a long time prior thereto Mitchell-Tappen Company was and had been engaged in the business of producing and selling devices including water cooling towers of great merit and had expended large sums of money in perfecting the same and making the same valuable to itself and the public and expended large sums of money in advertising, introducing and popularizing its said devices and at great expense employed experts and engineers who were engaged in solving the problems attending the atmospheric cooling of water as presented by the requirements of users of such devices and its devices and service and acquired and then had a high reputation for efficiency and value.

14. On or about November 21, 1914, the defendant applied to the said Mitchell-Tappen Company for information as to its said devices and the sale thereof and stated that it had theretofore sold Cooling Towers for others but of a type different from the devices of said Mitchell-Tappen Company; that it no longer represented such other

manufacturer and was desirous of making arrangements for the sale of another device of equal or superior merit.

15. Pursuant to said request of the defendant [44] said Mitchell-Tappen Company furnished defendant with the information requested and advised it as to the compensation which would be allowed for the sale of its devices and further negotiations were had and as a result thereof the defendant undertook for value to sell the devices of said Mitchell-Tappen Company in the State of California and vicinity.

16. Pursuant thereto, Mitchell-Tappen Company furnished said defendant with the names of prospective customers and with other information and instructions and assisted defendant in procuring customers for its said cooling towers and devices.

17. Defendant accepted said business and with the assistance of said Mitchell-Tappen Company, two of its said cooling towers were sold through the defendant to Shell Company in the State of California and were erected and installed at its plant.

18. Thereafter defendant undertook to manufacture and sell water cooling towers and devices on its own account and with the wrongful and fraudulent purpose and intent of obtaining the business of said Mitchell-Tappen Company and of making sales to its customers and prospective customers the defendant caused photographs of the said Water Cooling Towers of the said Mitchell-Tappen Company to be made and advertised and



published the same as devices of defendant's manufacture and wrongfully and fraudulently pretended to be the manufacturer of the genuine Mitchell-Tappen Company devices and used the mechanical drawings obtained from said Mitchell-Tappen Company for the purpose of manufacturing imitations of the genuine devices and thereby and by fraud and device obtained business and endeavored to [45] obtain business intended for said Mitchell-Tappen Company and continues so to do and the said defendant has thereby and by means of inferior devices sold as the genuine and efficient devices of plaintiff greatly damaged the business reputation of the genuine water cooling towers.

19. Plaintiff has succeeded to the branch of the business of said Mitchell-Tappen Company which includes cooling towers and devices and now carries on said business at the city of New York and elsewhere and advertises and sells its said devices throughout the United States and maintains the high quality, efficiency and reputation thereof established by its predecessor, Mitchell-Tappen Company and is and has been continually obstructed, damaged and injured in its business by the aforesaid unlawful acts and competition of defendant.

20. That plaintiff requested that the defendant discontinue its unlawful practices and was informed by counsel for defendant that it had discontinued the unlawful use of pictures of plaintiff's cooling devices in its advertising literature and plaintiff by letter to defendant's counsel requested



that it be informed as to whether the defendant had used plaintiff's plans and drawings for the construction of such devices but such information was refused, and defendant has endeavored to conceal its unlawful acts from plaintiff.

21. That the letters, communications and statements made by it as alleged in the said answer of the defendant and otherwise were lawfully and properly made by it for the purpose of lawfully carrying on its said business.

REPLYING TO THE COUNTERCLAIM,  
CAUSE 2, plaintiff alleges:

22. Replying to paragraph numbered XXVI of [46] the answer, plaintiff denies that Carl F. Braun was, at any time, the inventor of any invention as alleged in said paragraph or otherwise, but admits that on or about January 18, 1918, the said Carl F. Braun did file in the United States Patent Office, an application for letters patent.

23. Replying to paragraph numbered XXVII of the answer, plaintiff admits that on March 23, 1920, letters patent No. 1,334,515, were issued to Carl F. Braun but denies that said alleged letters patent were valid and denies that said letters patent were effective to grant any exclusive right to make, use or vend the alleged invention therein set forth and denies that the said Carl F. Braun was entitled to a patent thereon under the provisions of the Patent Laws of the United States and denies that the proceedings required by law to be had or taken prior to the issuance of said letters patent were had or taken.

24. Replying to paragraph numbered XXVIII of the answer, plaintiff denies that on April 28, 1920, or at any other time, said Carl F. Braun was the inventor of any invention within the meaning of the patent laws of the United States and is not informed, except by the said answer, whether or not upon said date the said Carl F. Braun did file in the United States Patent Office, an application for letters patent for said alleged invention.

25. Replying to paragraph numbered XXIX of the answer, plaintiff admits that on January 16, 1923, letters patent No. 1,442,784 were issued to Carl F. Braun but denies that said letters patent were effective to grant to the said Carl F. Braun any right to make, use or vend said alleged invention and denies that the proceedings required [47] by law to be had and taken prior to the issuance of the said letters patent were so had and taken.

26. Replying to paragraph numbered XXX of the answer, plaintiff is without knowledge as to whether the said Carl F. Braun assigned any alleged interest in the said alleged letters patent No. 1,344,515 and No. 1,442,784 or any claims arising out of said letters patent or either of them to the defendant and denies that the defendant is the owner of any right, title or interest in or to the said alleged inventions or the said alleged letters patent, or that it is entitled to bring or maintain its alleged set-off, counterclaim and cross-complaint.

27. Replying to paragraph numbered XXXI of the answer, plaintiff denies that the defendant has, at any time, gone to any expense or made any effort

to introduce the said alleged Water Cooling Towers to the public and denies that it has created any favorable impression thereof or that it has spent any money in connection with the manufacture of the same or the development of the alleged business and denies that the alleged rights of the defendant have been acquiesced in and denies that the defendant has given notice of its alleged patent as alleged in the said paragraph or otherwise and denies each allegation in the said paragraph.

28. Replying to paragraph numbered XXXII of the answer, plaintiff denies that it has at the time alleged in said paragraph or at any other time, and at any place infringed the alleged letters patent of the defendant or any of the claims thereof or that he has in any manner violated any rights of the defendant and denies that it has realized any gain or profit therefrom or that the defendant has [48] suffered any damage by reason of any acts of the plaintiff and denies every allegation in the said paragraph.

29. Replying to paragraph numbered XXXIII of the answer, plaintiff denies that it has ever infringed or threatened to infringe any rights of the defendant and denies every allegation in the said paragraph. [49]

20. For a further and separate defense and reply to said counterclaim, Cause 2, plaintiff alleges that by reason of the state of the prior art existing at the time of said alleged invention by the said Carl F. Braun of the device or devices alleged to be patented in and by the said alleged letters

patent No. 1,334,515 and No. 1,442,784 and each of them the said device or devices and each of them were not an invention or inventions and did not require an exercise of the inventive faculties for it or their production and were not patentable and that for that reason the said alleged letters patent No. 1,334,515 and No. 1,442,784 and each of them were and are null, void and of no effect.

31. For a further and separate defense and reply plaintiff alleges that said Carl F. Braun was not the original or first or sole or any inventor or discoverer of the alleged invention, alleged to be patented in and by the said alleged letters patent No. 1,344,515, or any or all of the claims thereof, or of any material or substantial part thereof, but that prior to the alleged invention thereof by the said Carl F. Braun and more than two years prior to the filing of the application for said alleged letters patent, the said alleged invention and every material and substantial part thereof, had been shown, described and patented in and by each of the following letters patent of the United States of America, and had been invented by each of the patentees named in each of said letters patent and each of the said patentees is the first and original inventor thereof and at all times was using reasonable diligence in adapting and perfecting the same and the respective places of residence of said patentees, are, as plaintiff is informed and verily believes, respectively set forth in said letters patent, to wit:



Patent No.	Date of Patent.	Patentee.
64,452	May 7, 1867	F. Schweikhart
107,950	Oct. 4, 1870	H. Anderson
111,292	Jan. 24, 1871	F. Windhausen
394,921	Dec. 18, 1888	A. Hallowell
395,691	Jan. 8, 1889	F. Carlisle
382,155	May 1, 1888	C. C. Hanford
430,881	June 24, 1890	J. Popper
444,558	Jan. 13, 1891	J. Klein
477,755	June 28, 1892	G. E. Hanisch
481,955	Sept. 6, 1892	F. Kaiser
537,392	Apr. 9, 1895	F. H. Moore
594,440	Nov. 30, 1897	J. Stocker et al.
621,718	Mar. 21, 1899	J. M. Seymour, Jr.
626,390	June 6, 1899	J. McCreery
638,931	Dec. 12, 1899	R. D. Kimball et al.
649,573	May 15, 1900	G. K. Fischer et al.
653,418	July 10, 1900	W. R. Jennison
661,192	Nov. 6, 1900	W. Ostendorf
666,361	Jan. 22, 1901	I. D. Snead
693,625	Feb. 18, 1902	H. B. Schmidt
700,990	May 27, 1902	Stocker
710,857	Oct. 7, 1902	W. Griesser
746,277	Dec. 8, 1903	J. N. Brenman
808,050	Dec. 19, 1905	F. Hauswirth
707,042	Aug. 12, 1902	C. H. Wheeler et al.
821,561	May 22, 1906	C. H. Wheeler et al.
836,702	Nov. 27, 1906	W. Ostendorf
890,332	June 9, 1908	E. Burhorn
844,336	Feb. 19, 1907	H. L. Doherty
826,658	July 24, 1906	W. W. Harris
412,886	Oct. 15, 1889	Hopper [51]



Patent No. (cont.)	Date of Patent.	Patentee.
902,875	Nov. 3, 1908	B. F. Hart, Jr.
907,874	Dec. 8, 1908	Haverstick
973,163	Oct. 18, 1910	E. Burhorn
978,986	Dec. 20, 1910	E. Burhorn
1,014,371	Jan. 9, 1912	E. Burhorn
1,050,909	Jan. 21, 1913	F. Bauer
1,052,226	Feb. 4, 1913	W. D. Douglas
1,128,513	Feb. 16, 1915	G. A. Richards
1,118,267	Nov. 24, 1914	E. Burhorn

—and in addition to the above-mentioned patents, plaintiff verily believes and alleges the fact to be that there are many others of which it is not at this time advised and prays leave to insert the same herein or to set the same up by an amended answer when the same become known.

32. As a further separate and special defense and reply plaintiff alleges that the alleged invention attempted to be patented in and by the said alleged letters patent No. 1,334,515 was described in various printed publications prior to the alleged invention or discovery thereof by the said Carl F. Braun and more than two years prior to his application for said alleged letters patent therefor, to wit, in the several letters patent above set forth which were severally printed and published on the said dates respectively set forth at the city of Washington, D. C. and in various other publications, the names and places of publication of which are [52] at this time unknown to plaintiff but which it prays leave to set up by amendment to this answer and reply when the same are discovered and become known to plaintiff.

33. As a separate and special defense and reply the plaintiff alleges that the alleged invention attempted to be patented by the said Carl F. Braun in letters patent No. 1,334,515 and all of the subject matter thereof was known to and in open notorious public use by others than the said Carl F. Braun in the United States prior to the alleged invention or discovery thereof by him and for more than two years prior to his alleged application for the aforesaid alleged letters patent and among others by the said several patentees above mentioned and at the places of residence specified in their aforesaid letters patent and at and prior to the dates of the said several patents and by Barton H. Coffey of and at the city of New York, in the State of New York, by Louis A. Phillips of and at the city of New York in the State of New York and by others whose names and addresses and the places of use are at this time unknown to plaintiff but which it prays leave to insert herein by amendment when discovered.

34. For a further separate and special defense and reply plaintiff alleges that for the purpose of deceiving the public, the description and specification filed by the said Carl F. Braun in the Patent Office in his application for the said letters patent No. 1,334,515 was made to contain less than the whole truth relative to his invention or alleged discovery or more than is necessary to produce the desired result and further that the said alleged invention and the said alleged patent is lacking in novelty or utility and the quality of invention and

the said letters patent No. 1,334,515 and each of the claims thereof are invalid in all respects. [53]

35. For a further separate defense and reply plaintiff alleges that the said Carl F. Braun was not the original or first or sole or any inventor or discoverer of the alleged invention alleged to be patented in and by the said alleged letters patent No. 1,442,784 or any or all of the claims thereof or of any material or substantial part thereof, but that prior to the alleged invention thereof by the said Carl F. Braun and more than two years prior to the filing of the application for the said letters patent, the said invention and every material and substantial part thereof had been shown, described and patented in and by each of the letters patent herein above set forth and in each of the following letters patent of the United States of America and had been invented by each of the patentees named in each of the said letters patent and each of the said patentees is the first and original inventor thereof and at all times was using reasonable diligence in adapting and perfecting the same and the respective places of residence of said patentees are as plaintiff is informed and believes, respectively set forth in the said letters patent, to wit:

No. of Patent	Date	Patentee
430,881	June 24, 1890	J. Popper
594,440	Nov. 30, 1897	J. Stocker et al.
621,718	Mar. 31, 1899	J. M. Seymour, Jr.
649,593	May 15, 1900	G. K. Fischer et al.
661,192	Nov. 6, 1900	W. Ostendorf
693,625	Feb. 18, 1902	H. B. Schmidt
710,857	Oct. 7, 1902	W. Griesser
821,561	May 22, 1906	C. H. Wheeler, et al.
902,875	Nov. 3, 1908	B. F. Hart, Jr.
973,163	Oct. 18, 1910	E. Burhorn
122,937	Jan. 23, 1872	A. Derrom

[54]

826,390	June 6, 1899	J. McCreery
1,228,207	May 29, 1917	B. F. Hart

—and in addition to the above-mentioned patents, plaintiff verily believes and alleges the fact to be that there are many others of which it is not at this time advised and prays leave to insert the same herein or to set the same up by an amended answer and reply when the same become known.

36. As a further separate and special defense and reply plaintiff alleges that the alleged invention attempted to be patented in and by the said alleged letters patent No. 1,442,784 was described in various printed publications prior to the alleged invention or discovery thereof by the said Carl F. Braun and more than two years prior to his application for said alleged letters patent therefor, to wit, in the several letters patent above set forth which were severally printed and published on the said dates respectively set forth at the city of Washington,

D. C., and in various other publications the names and places of publication of which are at this time unknown to plaintiff but which it prays leave to set up by amendment to this answer and reply when the same are discovered and become known to plaintiff.

37. As a separate and special defense and reply the plaintiff alleges that the alleged invention attempted to be patented by the said Carl F. Braun in letters patent No. 1,442,784 and all of the subject matter thereof was known to and in open notorious public use by others than the said Carl F. Braun in the United States prior to the alleged invention or discovery thereof by him and for more than two years prior to his alleged application for the aforesaid [55] alleged letters patent and among others by the said several patentees above mentioned and at the places of residence specified in their aforesaid letters patent and at and prior to the dates of the said several patents and by Barton H. Coffey of and at the city of New York, in the State of New York, by Louis A. Phillips of and at the city of New York in the State of New York and by others whose names and addresses and the places of use are at this time unknown to plaintiff but which it prays leave to insert herein by amendment when discovered.

38. For a further separate and special defense and reply plaintiff alleges that for the purpose of deceiving the public, the description and specifications filed by the said Carl F. Braun in the Patent Office in his application for the said letters patent



No. 1,442,784 was made to contain less than the whole truth relative to his invention or alleged discovery of more than is necessary to produce the desired result and further that the said alleged invention and the said alleged patent is lacking in novelty or utility and the quality of invention and the said letters patent No. 1,442,784 and each of the claims thereof are invalid in all respects.

WHEREFORE, plaintiff prays a decree of this Court that the setoff, counterclaim and cross-complaint of the defendant be dismissed and for the relief prayed in its bill of complaint with costs and such other and further relief as to this Court may seem proper and in accordance with good conscience.

THE COOLING TOWER CO., INC.

By A. B. TAPLIN,

President.

[Seal]

Attest: J. H. TAYLOR,

Secretary.

ASHLEY and FOULDS,

EDWARD A. O'BRIEN,

Solicitors and Counsel for Plaintiff.

[Endorsed]: Filed Apr. 14, 1923. Walter B. Maling, Clerk. By J. A. Schaertzer, Deputy Clerk.

Receipt of copy of within answer admitted this 14th day of April, 1923.

CHAS. E. TOWNSEND,

WM. A. LOFTUS,

Attys. for Defendant. [56]

In the Southern Division of the United States District Court, for the Northern District of California, Second Division.

IN EQUITY—No. 923.

For Infringement of Letters Patent No.  
1,010,020.

COOLING TOWER COMPANY, INC. (a Corporation),

Plaintiff,

vs.

C. F. BRAUN & CO. (a Corporation),

Defendant.

### DEPOSITIONS.

Depositions on behalf of plaintiff taken pursuant to notice and the law and practice of this court before John J. Coyle, Notary Public, at Room 900 No. 120 Liberty Street, Borough of Manhattan, City of New York and State of New York on June 6th, 1923, at ten A. M.

Present: WILLIAM F. ASHLEY, Jr., of Counsel  
for Plaintiff.

FREDERICK S. DUNCAN, of Counsel  
for Defendant.

Adjourned by consent to Saturday, June 9, 1923,  
at the same hour and place. [57]

(Deposition of Barton H. Coffey.)

June 11, 1923.

Met pursuant to adjournment.

Present: ANDREW FOULDS, Jr., of Counsel for  
Plaintiff.

FREDERICK S. DUNCAN, of Counsel  
for Defendant.

DEPOSITION OF BARTON H. COFFEY, FOR  
PLAINTIFF.

BARTON H. COFFEY, witness on behalf of  
the plaintiff, being first duly sworn, deposes and  
says:

Direct Examination by Mr. FOULDS.

Q. 1. Please state your name, age, residence  
and occupation?

A. Barton H. Coffey, age, 58; residence, 136  
DeHart Place, Elizabeth, New Jersey; Mechanical  
Engineer.

Q. 2. Are you connected with the Cooling  
Tower Co., the plaintiff, and if so, in what capa-  
city? A. I am the chief engineer of the company.

Q. 3. How long have you occupied that position?

A. Since 1915.

Q. 4. Since 1915 when the company was incor-  
porated? A. Yes.

Q. 5. Prior to that time were you connected with  
the Mitchell-Tappen Company? A. Yes. [58]

Q. 6. For how long a time had you been con-  
nected with the Mitchell-Tappen Co.?

A. From 1911.

Q. 7. Was the Mitchell-Tappen Co. at that time

(Deposition of Barton H. Coffey.)

engaged in the sale of atmospheric cooling apparatus?

A. They began in 1911 to manufacture and sell atmospheric cooling apparatus.

Q. 8. Did the Cooling Tower Co., take over that branch of the business of Mitchell-Tappen Co.?

A. They did.

Q. 9. What had the Mitchell-Tappen Co. done in relation to the development of cooling apparatus prior to the organization of the Cooling Tower Co.?

A. They experimented and tested atmospheric cooling apparatus.

Q. 10. In what territory did the Mitchell-Tappen Co. do business?

A. They did business in the whole United States, I think in Mexico, possibly in Cuba. I am not prepared to state exactly without consulting the detailed sales record of the Mitchell-Tappen Co. as my recollection of exactly where the Mitchell-Tappen Co. left off and the Cooling Tower Co. began with reference to the sales is not clear.

Q. 11. What means did the Mitchell-Tappen Co. employ to create a demand for its product? [59]

A. They advertised extensively, they solicited extensively and they made extraordinary efforts to give the best advice to their customers they knew how and to furnish the best material they knew how so that every customer should be a satisfied customer and thus produce a form of advertising that in the long run is the most valuable.

Q. 12. Did the company have sales agents and representatives throughout the country?

(Deposition of Barton H. Coffey.)

A. They did.

Q. 13. Did the company also use catalogs and descriptive literature? A. They did.

Q. 14. Are you the patentee of the patent in suit?

A. I am.

Q. 15. Have you also taken out other patents in the same art? A. I have.

Q. 16. What experience and training have you had in the cooling tower art?

A. I first came in contact with atmospheric cooling I think in 1907 or 1908 through a connection I had with Edwin Burhorn who was then beginning the exploitation of the Ostendorff atmospheric cooling tower, which was, I believe, the first serious attempt to introduce this type of [60] tower in the United States. Ostendorff was one of the pioneer inventors of this type of apparatus. I became very much interested in the atmospheric cooling problem from a scientific standpoint. The condition of the science at that time being almost entirely rule of thumb. In order to get data upon which some form of mathematical theory could be produced, I made numerous tests of towers then in existence and closely observed all I had the opportunity of visiting in actual operation. I have continued my study of this subject which is a very baffling one and which is not yet on a sound theoretical basis to date.

The main objects of a correct mathematical theory of atmospheric cooling are two. First: With a given quantity of air and a given quantity of water, at a certain temperature, to produce a



(Deposition of Barton H. Coffey.)

maximum possible cooling effect. Second: To be able to predict accurately what cooling effect can be obtained under the various atmospheric conditions and ranges of cooling so that cooling guarantee can be made on a sound basis and carried out with the apparatus specified. In the pursuit of this objective I have spent and am still spending all the time I have available on the study and examination of all types of atmospheric cooling, atmospheric forced draft and chimney cooling towers, spray ponds, etc.

Q.17. To what extent have the cooling towers of the plaintiff gone in to use? [61]

(By Mr. DUNCAN.)

Question objected to as irrelevant unless confined to cooling towers embodying the invention of the patent in suit.

A. I believe some 500 or 600 atmospheric towers of the Cooling Tower Company have been put into use throughout continental United States and our possessions, and that is the Phillipines, Cuba, Mexico, South America and Europe.

Q.18. Have these cooling towers been equipped with the device of the patent in suit?

A. They have.

Q.19. Since the patent in suit, No. 1,010,020 was issued November 28, 1911, has the plaintiff and its predecessors employed this device in its cooling towers? A. They have.

Q.20. What are the particular advantages of the device of the patent in suit?

(Deposition of Barton H. Coffey.)

A. The particular advantages are two:

First. The deck as made up in accordance with the patent is, with the exception of the fastening, entirely wood which experience has shown to be the most reliable material for this purpose. Second: The introduction of wood instead of metal for deck elements, however, brings in certain disadvantages. These are the warping [62] and twisting and general tendency of wood to get out of line. The effect of this is to close up some of the spaces between the deck members and open others wide, thus impairing the distribution through the tower and so lowering its efficiency. To correct this defect, and maintain a uniform opening between the deck members, the groove and spline system of spacing as shown in the patent was devised. This I consider the second advantage. The third advantage is the two grooves shown at the bottom of the drip bar, the effect of which is to cause the water falling on each bar to divide up into two lines of drops instead of one, thus greatly increasing the subdivision of the water, another factor upon which the efficiency of the apparatus depends

Q. 21. Please describe briefly the construction and operation of an atmospheric cooling tower of the type referred to in the patent in suit?

A. The water to be cooled enters a distributing device at the top of the tower. This device in general forms a part of the supply pipe system. After leaving this distributing device, the water

(Deposition of Barton H. Coffey.)

enters a deck composed of a series of gutter section wood bars, overflows these bars in an approximately uniform film which flows down the sides of the bar, turns the bottom edge and at the two grooves, is transformed into drops and this is uniformly distributed upon another deck composed of approximately flat top bars. [63]

A splash is formed on this deck having the appearance of foam and is a very valuable cooling surface, water then drops to another flat top deck and the cycle is repeated from deck to deck until the water finally reaches a pan or basin from which it flows to the point where it is used. While the water is thus passing from deck to deck in the form of fine drops, and spray, air passes horizontally between the decks, absorbs heat from the water and passes out on the side opposite to which it entered. The water is thus cooled progressively from deck to deck and reaches the final temperature desired in the basin referred to. This is a rough description of the cooling process common to all atmospheric cooling towers.

Q. 22. What is the object sought to be obtained in a cooling tower of this type?

A. The object is to reduce the temperature of the maximum amount of water possible to the lowest point possible.

Q. 23. How is this device useful in commercial establishments?

A. In large numbers of industries, heat is a by-product that must be disposed of. In refrigera-

(Deposition of Barton H. Coffey.)

tion the heat taken out of the cooled substances plus the work of compression passes out through the ammonia condenser into the cooling circulation. Enormous quantities of water are required for this circulation, the cost of which is prohibitive [64] and in many places it is impossible to obtain it at any cost. The atmospheric cooling tower, by re-cooling the water of the circulation, renders it possible to operate plants in arid regions where water cannot be obtained and to eliminate heavy water bills where city water would have to be purchased. In general, waste heat is being discharged in enormous volumes in power plants, oil refineries, distilleries, and other industrial processes, and is now being taken care of by cooling towers.

Q. 24. In November, 1914 was your company engaged in producing these cooling towers?

A. Yes.

Q. 25. Did the Mitchell-Tappen Co. receive a letter from the defendant dated November 21, 1914?

(By Mr. DUNCAN.)

Question objected to unless the witness has personal knowledge of any such correspondence.

A. They did.

Q. 26. Will you produce it?

A. I produce it.

(The letter produced by the witness is offered in evidence and marked Plf. Exhibit 1.—J. J. C.)



(Deposition of Barton H. Coffey.)

Q. 27. Are you familiar with the tower known as the Alberger tower? A. Yes. [65]

Q. 28. Will you please explain what it is?

A. The Alberger tower is a forced draft type, is generally circular in form, shell being made of steel, the distributor is of rotating or Barker's Mill type discharging upon a checker work filling consisting of boards on edge in layers, the boards in each adjacent layer being in opposite direction, thus forming a checker work. The water on leaving the checker work, drops into a basin below. In the space between the bottom of the checker work and the basin, a fan discharges air under pressure, which ascends through the checker-work thus producing a counter current contact between air and water. The air escapes at the top of the checker-work to the atmosphere carrying away with it the heat abstracted from the water.

Q. 29. What is meant by the term "forced draft" as used in your answer?

A. Forced draft means that the air necessary to produce cooling effect is blown or forced with mechanically operated fans as opposed to currents of air produced by winds or breezes or by convective action as in a chimney.

Q. 30. Are the cooling towers illustrated in the patent in suit 1,010,020, and the defendant's patent, 1,334,515 and 1,442,784 of the forced draft type? A. They are not. [66]

Q. 31. Following this letter of Nov. 21, 1914, written by C. F. Braun & Co., the defendant, to



(Deposition of Barton H. Coffey.)

Mitchell-Tappen Co. were arrangements made with C. F. Braun & Co., to sell the Mitchell-Tappen Co. cooling towers?

(By Mr. DUNCAN.)

Question objected to in case the suggested arrangement were in writing, unless the written documents are produced and if not in writing, objected to unless the alleged arrangement is within the personal knowledge of the witness and his answer is confined to his own personal dealings with the defendant.

A. I know arrangements were made with Mr. Braun but I did not personally carry on negotiations, the details of which I do not remember, and therefore cannot answer this question in detail.

Q. 32. Do you know which officer of your company had charge of that transaction?

A. The treasurer, Mr. Phillips has charge of that transaction.

Cross-examination by Mr. DUNCAN.

X Q. 33. What other patents have you taken out relating to cooling towers beside the patent in suit?

A. I took out a patent 1,158,107 covering [67] frame work of an atmospheric tower, and patent 1,027,184 covering a chimney draft tower and others relating to distributors for atmospheric towers and possibly others that I do not recollect.

XQ. 34. Was the patent in suit the first cooling patent that you took out?

A. I think it was. I don't recollect any other just now.

(Deposition of Barton H. Coffey.)

XQ. 35. I suppose the Cooling Tower Co. owns a number of other patents besides those taken out by you?

A. I don't think they do own any others except mine, on cooling towers.

XQ. 36. Did the Mitchell-Tappen Co. own any other patents on cooling towers except the Coffey patents?

A. I do not remember any other patents but mine.

XQ. 37. Did the Mitchell-Tappen Co. own the Burhorn patents? A. Not of my knowledge.

XQ. 38. During the period of your connection with the Mitchell-Tappen Co. and with the Cooling Tower Co. you have in the course of your experiments devised a number of improvements in their cooling towers haven't you?

A. That is what I have been trying to do.

XQ. 39. You have designed a number of modifications or [68] changes from time to time that have been adopted by the Mitchell-Tappen Co. or the Cooling Tower Co. in their cooling towers have you not? A. Yes.

XQ. 40. When do you understand the first cooling tower was made by the Mitchell-Tappen Co. or the Cooling Tower Co. embodying the invention of your patent in suit, 1,010,020?

A. In 1911 or 1912.

XQ. 41. Has the Mitchell-Tappen Co. and the Cooling Tower Co. built all of its subsequent towers on exactly the same design as the first tower in

(Deposition of Barton H. Coffey.)

1911 or 1912 or has it built subsequent towers embodying other inventions or changes designed by you? A. It changes every year.

XQ. 42. And some of these other changes have been covered by other patents to you than the patent in suit, is that right?

A. No, the changes I refer to are improvements in engineering practice.

XQ. 43. Do I understand that the only patent that the Cooling Tower Co. now owns inventions of which are included in your present cooling towers is your original patent 1,010,020? [69]

A. No.

XQ. 44. What other patents does the Cooling Tower Co. own, inventions of which are included in your present cooling towers?

A. 1,058,107. I will look up further information on this and answer later.

XQ. 45. When you say that the cooling towers made by the plaintiff contained the invention of the patent in suit, exactly what part of the construction are you referring to in that answer?

A. The decks.

XQ. 46. In what particular feature or features of the deck do you consider to involve the invention of the patent in suit? A. The clamp.

XQ. 47. Please point by reference to the patent in suit the clamp that you referred to in your answer?

A. I should have said splines in my last answer.

XQ. 48. Now, do I understand you correctly, that

(Deposition of Barton H. Coffey.)

the only feature of your patent 1,010,020 which you consider present in the cooling tower company's cooling towers is the splines? A. No.

XQ. 49. Please make a comprehensive statement of all [70] features of plaintiff's patent 1,010,020 that you find to be present in the cooling towers made by the Cooling Tower Co?

A. The splines and the grooves. On the bottom of the bars.

XQ. 50. Now, please refer to the plaintiff's patent, and point out by reference to the drawings or description those particular features which you say are present in the plaintiff's cooling towers?

A. The distributing bar, fig. 3 at the top of the tower is made as shown in the patent and is now in use. The splash bar, fig. 2, is made as shown and is now in use with the following addition, that is a corrugated top, not shown in this patent.

Recess till 2 P. M.

A. (Continued.) The splines for keeping the bars in alignment are still in use and the bars are also fastened at their ends although not as shown in the patent.

XQ. 51. Did the Cooling Tower Co. or its predecessor Mitchell-Tappen Co. ever make a cooling tower with the ends of the drip bars fastened to the frame in the exact manner shown in the patent in suit?

A. I think we have. I would like though to refresh my memory on that point.

(Deposition of Barton H. Coffey.)

XQ. 52. If you ever made such a cooling tower how long ago was it? [71]

A. We are making them now and have been making them for six or seven years. This is a small tower that we call a towerette, but I cannot, without looking at the plans, refresh my memory how the fastening at the ends is arranged. As I recollect, however, these bars are in a frame and very similar to what is shown in this patent, Fig. 6, with screws going into the end of the bar.

XQ. 53. When in answer to question 18, you stated that cooling towers made and sold by your company have been equipped with "the device of the patent in suit" what particular features did you have in mind as covered by the phrase "the device of the patent in suit"? A. Our patent.

XQ. 54. What particular features of your company's cooling towers did you have in mind when you stated that they were equipped with the device of the patent in suit? A. The drip bars.

XQ. 55. And what features connected with the drip bars do you consider to be the device of the patent in suit?

A. The method of fastening and holding the bars in place.

XQ. 56. And what is that method that is the device of the patent in suit?

A. That device is the splines 7, Fig. 4 and pins or screws 10, Fig. 6. [72]

XQ. 57. Does your company now use any metal in the manufacture of its cooling towers?



(Deposition of Barton H. Coffey.)

A. Yes.

XQ. 58. Do you use cooling towers now where the metal is exposed to the liquid? A. Yes.

XQ. 59. Which is your regular construction now, the metal cooling tower or the all wood cooling tower?

A. We have neither all metal nor all wood, all our towers are combinations of the two.

XQ. 60. Have you one of your current catalogs here, Mr. Coffey?

A. I produce one of our recent catalogs.

XQ. 61. I gather from this catalog that you have produced which is copyrighted 1921, that in many instances you use steel frames and metal louvers and other metal parts which are exposed to the liquid, is that correct? A. Yes.

XQ. 62. Have you been able to refresh your recollection as to the patent your company is using in the manufacture of its towers?

A. Our catalog shows the following patents in the United States:

Nov. 28, 1911, No. 1, 010, 020;

May 21, 1912, No. 1,027,184;

Oct. 26. 1915, No. 1,158,107;

Feb. 8, 1921, I have not got the number of this patent here but I think it is a distributing patent. [73] The list also says, patents pending, and these probably cover the gravity and distributors that we also use.

XQ. 63. Your catalog shows various differing de-

(Deposition of Barton H. Coffey.)

tails of construction not shown in the patent in suit, 1,010,020, does it not?

A. It shows the details of other parts of the tower than the deck system. It shows also however, on page 2, section A, the details of our deck system.

XQ. 64. You make other forms of cooling towers than the particular one shown in this catalog do you not?

A. We advertise forced draft and chimney towers, but have not as yet been successful in putting any in.

XQ. 65. You do, however, make atmospheric cooling towers having various details of construction different from the particular ones illustrated and described in your catalog which you have just produced, do you not?      A. No.

XQ. 66. I wonder if you understood my last question correctly, do you mean to say that this catalog which you have just produced which is marked catalog No. 9B, copyright 1921 contains illustrations and descriptions of every form of atmospheric cooling tower which your company was making during 1921 or has made since?

A. I believe it does. [74]

XQ. 67. Did your company design and build the atmospheric towers for the Gay Engineering Company in Los Angeles?

A. I am not sure whether they did or not. Our treasurer will be able to give you full information. I have nothing to do with the sales.

(Deposition of Barton H. Coffey.)

XQ. 68. What kind of a tower was your company or its predecessor making in 1914?

A. A composite type of tower, that is steel frame wooden decks and either wood or metallic louvers depending upon the demands of the customer or the fire regulations at the site.

XQ. 69. Do you recall exactly when the Cooling Tower Company was organized?

A. I think it was in 1915, but I don't remember the date.

XQ. 70. Prior to the organization of the Cooling Tower Co. was the Mitchel-Tappen Co. actually making and selling atmospheric cooling towers?

A. Yes.

XQ. 71. For how long prior to the formation of the Cooling Tower Co. had the Mitchell-Tappen Co. been making and selling Cooling Towers?

A. About four years.

XQ. 72. Had your company a large drafting or engineering force under your charge?

A. Quite a good size force. [75]

XQ. 73. Your company uses various frame constructions does it not, in making its atmospheric towers? A. Yes.

XQ. 74. And it uses various methods of attaching the slats or drip bars of the decks to the frame work, does it not? A. Yes.

XQ. 75. And it uses different forms and methods of supporting the louvers does it not? A. Yes.

XQ. 76. And it uses different feeding apparatus, does it not? A. If you mean distributors, yes.

(Deposition of Barton H. Coffey.)

XQ. 77. And it has made changes in the form or detail of the drip bars, does it not? A. Yes.

XQ. 78. When did your company adopt the corrugations on the top of the drip bar instead of the rounded or flat top of the drip bar?

A. I think in 1913, if I am not mistaken. I am not sure of the exact time without consulting the records [76]

Mr. COFFEY (Recalled).

Redirect Examination by Mr. FOULDS.

RDQ. 79. Do you recall writing a letter on behalf of Mitchell-Tappen Co. to the Shell Co. of California, April 5, 1915? A. Yes, I recall writing it.

RDQ. 80. Have you a copy of that letter, and if so, produce it.

Q. 81. Was this letter sent in the regular course of business of the Mitchell-Tappen Co.? A. Yes.

(The letter produced by the witness is marked Plaintiff's Exhibit 8 for Identification.—J. J. C.)

Q. 82. Have you the letter of the Shell Co. of California dated March 29, 1915?

A. It is in the files of the company.

Q. 83. Did you, on or about March 1st, 1915, on behalf of Mitchell-Tappen Co. write to C. F. Braun & Co?

A. This letter is not signed with my initials but I recall sending it, and I produce the carbon copy.

(The letter produced by the witness is marked Plaintiff's Exhibit 9 for Identification.—J. J. C.)

[77]

DEPOSITION OF LOUIS A. PHILLIPS, FOR  
DEFENDANT.

LOUIS A. PHILLIPS, a witness on behalf of the defendant, being duly sworn, deposes and testifies as follows:

Q. 1. Please state your name, age, residence and occupation?

A. Louis A. Phillips, age 44; 32 Fraser Place, Hastings-on-Hudson, New York; Treasurer of the Cooling Tower Co.

Q. 2. How long have you been connected with the Cooling Tower Co., the plaintiff in this case.

A. Ever since its incorporation.

Q. 3. Do you recall when it was incorporated?

A. It must have been about 1915.

Q. 4. That company was incorporated for the purpose of taking over what business?

A. The cooling tower department of the Mitchell-Tappen Co.

Q. 5. Were you connected with the Mitchell-Tappen Co. prior to the incorporation of the Cooling Tower Co.?     A. I was, as secretary.

Q. 6. For how long a time were you connected with the Mitchell-Tappen Co. prior to the incorporation of the plaintiff?

A. Since the incorporation of the Mitchell-Tappen Co. [78]

Q. 7. Can you tell when about that was?

A. In 1911 or 1912.

Q. 8. What have been your duties in both of these companies?



(Deposition of Louis A. Phillips.)

A. Executive and any business necessary for the transaction of the company.

Q. 9. Have you had any technical training?

A. Yes, I am a graduate of Stevens Tech. Institute with degree of Mechanical Engineer and before forming the Mitchell-Tappen Co. I was with Edwin Burhorn for about seven years, during all which time Edwin Burhorn was making and selling cooling towers. Prior to this, I was with the Pullman Company, the Niagara Falls Power Co. and the George A. Fuller Con. Co.

Q. 10. Did the Mitchell-Tappen Co. after its incorporation, do any advertising? A. Yes.

Q. 11. Have you any samples of its advertising?

A. Yes, a good many. I produce Bulletin No. 7 which was issued in the fall of 1913. We continually advertised in a publication known as Ice and Refrigeration, and from time to time in other papers such as the Engineering Record, Cold Storage and Ice Trade Journal, Southern Engineer, Brewer's Journal, Refrigerating World, American Brewer, [79] Power, and other trade papers.

Q. 12. Does this scrap-book which you produced contain specimens of your advertising with the correct dates? A. It does.

Q. 13.

(The scrap-book produced by the witness is marked Plaintiff's Exhibit 2 for Identification.—J. J. C.)

(The Bulletin, No. 7, produced by the witness

(Deposition of Louis A. Phillips.)

is offered in evidence and marked Plaintiff's Exhibit No. 3.—J. J. C.)

Q. 13. In or about the month of November, 1914, did you receive a letter from C. F. Braun & Co?

A. Yes.

Q. 14. Who had charge of the C. F. Braun & Co. Correspondence in this matter. A. I did.

Q. 15. Have you the letter referred to?

A. I have.

Q. 16. Please produce it?

(The witness produces letter from C. F. Braun & Co. to Mitchell-Tappen Co. dated Nov. 14, being Defendant's Exhibit 1.—J. J. C.) [80]

Q. 17. So far as you recall was this letter of Nov. 21, 1914, the first communication received by your company from C. F. Braun & Co.? A. It was.

Q. 18. Did you answer that letter?

A. We did. We answered the letter under date of November 22, 1914.

Q. 19. Have you a carbon copy of the letter which you wrote? A. I have and I produce.

Q. 20. The initials at the foot of this letter are P/W. A. I personally wrote that letter.

Plaintiff's counsel calls upon defendant's counsel to produce the original letter dated Nov. 27, 1914, written by Mitchell-Tappen Co. to C. F. Braun & Co.

(The carbon copy of the letter produced by the witness is marked Plaintiff's Exhibit No. 4 for identification.—J. J. C.)

(Deposition of Louis A. Phillips.)

Q. 21. Was there any enclosure sent with this letter Plaintiff's Exhibit 4 for identification?

A. Yes, Bulletin No. 7.

Q. 22. Did you receive a reply from C. F. Braun & Co?

A. Yes, under date of Dec. 24, 1914, which I produce. [81]

(The letter produced by the witness is offered in evidence and marked Plaintiff's Exhibit No. 5.—J. J. C.)

Q. 23. Did you write in answer to this letter Plaintiff's Exhibit No. 5?

A. Yes, under date of Dec. 30, 1914, a copy of which I produce.

(The letter produced by the witness is marked Plaintiff's Exhibit No. 6 for identification.—J. J. C.)

Q. 24. What followed the sending of this letter marked Plaintiff's Exhibit 6 for identification?

A. Having learned that Mr. Braun was coming to New York, we wrote him under date of Feb. 27, 1915, that we would be glad to see him and that we had a number of inquiries from his part of the country and could not handle them in the personal way we would like to.

Q. 25. Have you a copy of that letter?

A. I have, and I produce it.

(The letter produced by the witness is marked Plaintiff's Exhibit No. 7 for identification.—J. J. C.)

Q. 26. Do you recall receiving an inquiry from California the early part of April, 1915? [82]

(Deposition of Louis A. Phillips.)

A. I do from the Shell Co. of California.

Q. 27. What did you do in answer to that inquiry?

A. I turned it over to our chief engineer for reply.

Q. 28. Who was the chief engineer?

A. Mr. B. H. Coffey.

Q. 29. Have you a copy of his letter?

A. I have. It is dated April 5, 1915, and I produce it.

(The letter produced by the witness is marked Plaintiff's Exhibit 8 for identification.—J. J. C.)

Q. 30. Did you notify C. F. Braun & Co. of the inquiry received from the Shell Co.? A. We did.

Q. 31. How did you communicate to C. F. Braun & Co. this information?

A. By letter dated April 21, 1915, written by our Mr. B. H. Coffey.

Q. 32. Have you a copy of that letter?

A. I have, and I produce it.

(The letter produced by the witness is marked Plaintiff's Exhibit 9 for identification.—J. J. C.)

Q. 33. As a result of this, do you recall whether a Mitchell-Tappen Co. cooling tower was sold to the Shell Company? [83]

A. I do, and a second duplicate tower.

Q. 34. Were these towers erected by C. F. Braun & Co., the defendant? A. They were.

Q. 35. Did you receive a photograph showing the tower after erection? A. We did.

Q. 36. Have you the photograph?

A. I have, and I produce it.

(Deposition of Louis A. Phillips.)

(Photograph produced by the witness is offered in evidence and marked Plaintiff's Exhibit 10.— J. J. C.)

Q. 37. From whom did you receive this photograph Plaintiff's Exhibit 10?

A. I think it was forwarded by Mr. Braun although it may have been forwarded by the Shell Company.

Q. 38. Can you refresh your recollection by reference to the correspondence?

A. Yes. I have a letter from C. F. Braun & Co. dated February 17, 1916, stating that he is enclosing two photographs of the Shell Towers.

(The letter produced by the witness is offered in evidence and marked Plaintiff's Exhibit 11.— J. J. C.) [84]

Q. 39. Do you recall any particular use made by Braun & Co. of the photograph of your towers at the Shell plant?

A. Yes, I recall the pamphlet issued by Braun and showing picture of our towers, at the Shell plant.

Q. 40. Have you a copy of that pamphlet?

A. I had a copy but so far have not been able to locate it.

Q. 41. Are you familiar with the corporate seal of Mitchell-Tappen Co.?

A. I am, and as secretary have used it many times.

Q. 42. Can you identify the signature and seal on the paper which I show you? A. I can.



(Deposition of Louis A. Phillips.)

Q. 43. And was it affixed by order of the Board of Directors of that company?     A. It was.

Q. 44. Do you know the signature affixed below the name Mitchell-Tappen Co. as president?

A. The signature is Mr. Mitchell's.

Q. 45. Was he at the time president of the company?     A. He was and always has been.

(The paper referred to being assignment from Mitchell-Tappen Co. to the Cooling Tower Co. of the patent in suit, No. 1,010,020 dated May 17, 1915, is offered in evidence and marked [85] Plaintiff's Exhibit No. 12.—J. J. C.)

Q. 47. Is the structure shown in the photograph Plaintiff's Exhibit 10 the structure as sold by you?

A. Yes.

Q. 48. Do you know of any changes made in the structure?

A. Yes, one of the towers was considerably increased in size.

Q. 49. What knowledge have you with reference to this?

A. We received tests from the Shell Company showing addition to the length of one tower which increases its capacity. [86]

DEPOSITION OF BARTON H. COFFEY, FOR  
PLAINTIFF (RECALLED).

Examination of BARTON H. COFFEY (Re-  
sumed.)

Q. 83. Mr Coffey, have you done any original

(Deposition of Barton H. Coffey.)

research work in connection with the theory of cooling towers? A. I have.

Q. 84. Please state what you have done?

A. I have made a large number of tests of cooling towers in collaboration with Mr. George A. Horn, and we have examined the scientific record of attempts to formulate a cooling tower theory, as a result of this work we have presented a series of papers entitled "A Theory of Cooling Towers Compared with Results in Practice" a number of these papers have appeared under this title in A. S. R. E. Journal beginning in November, 1914.

Q. 85. Have you a copy of the A. S. R. E. Journal containing your article?

A. I have a copy of A. S. R. E. Journal for November, 1914, containing the first paper of the series presented by Mr. George A. Horn and myself.

(Copy of "A. S. R. E. Journal" published by American Society of Refrigerating Engineers, N. Y., N. Y., November, 1914, Volume 1, No. 1 and the article appearing therein on pages 78 to 95, inclusive, entitled "A Theory of Cooling Towers Compared with Results in Practice" by B. H. Coffey and George A. Horne is offered in evidence and marked [87] Plaintiff's Exhibit 13.—J. J. C.)

It is stipulated that the paper Plaintiff's Exhibit 13 offered in evidence was published in or about the month of November, 1914.

Q. 86. Have the results of your investigations been used by others in this industry?

A. I believe they have.

(Deposition of Barton H. Coffey.)

Q. 87. Can you refer to any particular instance?

A. I find that the C. F. Braun Co. Bulletin 101, page 17, and page 18 that the six paragraphs on page 17 and the first paragraph on page 18 referred to the development of a heat flow factor covering both the sensible heat and latent heat currents. To one without detailed knowledge of the scientific work of the art of atmospheric cooling a reading of the paragraphs cited would most likely lead to the conclusion that Mr. Braun and his engineering staff were the original developers of this important heat relation as it gives no credit to others for the work referred to. The development of this heat factor forms part of the original work of B. H. Coffey and George A. Horne presented before the American Society of Refrigerating Engineers at the mid-winter meeting of the society in their paper entitled "A Theory of Cooling Towers Compared with [88] Results in Practice."

Q. 88. What knowledge have you as to the early methods of supporting the louvers in cooling towers?

A. I have knowledge of the various methods of supporting louvers.

Q. 89. Please state what knowledge you have?

(By Mr. DUNCAN.)

Question objected to except as it calls for the personal knowledge of the witness and as it may relate to methods set up in the answer to the countersuit.

A. Louvers can be divided into two classes; close

(Deposition of Barton H. Coffey.)

louvers and large louvers. The methods of support naturally accommodate themselves and are consistent with the size and weight of the parts supported.

### CLOSE LOUVERS.

The earlier towers both in wood and steel used almost exclusively to my knowledge close louvers, in Fig. 1 of the sketch I produce the method of supporting such louvers of wood is shown. The upright posts at the side of the tower are generally made wide enough to accommodate entire louver. The support consisted of blocks cut to the level of the louvers and nailed to the post with a space between each block on each side of the post forming a groove into which the louver was slipped, nailed fast. [89]

Fig. 2 shows the method of supporting close louvers of corrugated metal consisting of an upright steel member as a channel to which are riveted or bolted projecting angles to which are bolted the corrugated louvers. Fig. 3 shows the method of supporting metal louvers constructed of flat metal. In this case the supporting member consisted of a web plate of metal punched on the bevel of the louvers to which the louvers were bolted by flanging both ends of the louver plates.

### LARGE LOUVERS.

I believe Mr. Hart was the originator of the large louver. His method is shown in Fig. 4 consisting of louvers of a size to cover the full space between his drip decks, these decks were in some cases six



(Deposition of Barton H. Coffey.)

feet five thus involving a very large louver. His method of support consisting of extending the members supporting his decks beyond the side post of his tower and attaching same to an inclined member which was in turn secured at its other end to the deck member below, thus forming a series of triangles whose third side consisted of his side post, to those inclined members the louvers consisting of either metal or wood were secured by appropriate fastening. Fig. 5 shows another method of supporting large louvers consisting in securing the inclined member to the ends of the deck members and supporting the outer end of the inclined [90] member by a pendent or tension member supported to a triangular member at the top which transmits the weight of the louvers to the main frame and its bracing. In Fig. 6 we have another method of supporting large louvers possessing some advantages over the ones shown previously. In this case the inclined members are attached both to the extended deck members and to an outside member thus forming a frame on the outside of the tower which is completely braced, that is composed of a series of complete triangles. The complete bracing as shown makes of the louver support as a whole a lattice girder, greatly stiffening the tower against wind pressure. This method of support is used of metal and wood louvers, steel frame and wood decks as shown. It will be observed on all the devices for supporting the large louvers that they uniformly consist of inclined members tied



(Deposition of Barton H. Coffey.)

in the main frame of the tower in various ways. Those are the only methods of support I know of.

Q. 90. In your answer you have referred to certain figures, to what paper did you refer?

A. I refer to the sketches I have just made and submit it.

Q. 91. (The two sheets of sketches made by the witness are offered in evidence and marked Plaintiff's Exhibit 14, Coffey Sketch.—J. J. C.) [91]

(By Mr. DUNCAN.)

The exhibit is objected to as incompetent and secondary.

Q. 91. Who is the Mr. Hart referred to in your answer?

A. Mr. Hart is the Franklin Hart of the Hart Cooling Tower Co. of New York.

Q. 92. Have you seen any of the Hart Towers containing the louver support shown in your sketch Exhibit 14, Fig. 4? A. I have.

Q. 93. Please state when and where you have seen this device?

A. I have seen them in New York, Jersey City, Scranton, Penn., and possibly other places during the last ten or twelve years.

Q. 94. Can you more particularly designate the location?

A. I saw one at the Huyler Candy factory, E. 18th Street, I think.

Q. 95. In New York City? A. Yes.

A. (Continuing.) Five or six years ago I think. I saw another one at Elder & Wells, I think at

(Deposition of Barton H. Coffey.)

West 17th Street [92] seven or eight years ago. I saw another at the Lackawanna Coal Storage Co. Scranton, Penn., seven or eight years ago.

Q. 95. Can you fix the dates more definitely?

A. In general, I know that Mr. Hart had been in the manufacturing of towers of this kind the last twelve or fourteen years.

Q. 96. Upon what do you base that statement?

A. By my memory and personal observation of the towers.

Q. 97. Can you fix definitely the first Hart tower of this type which you saw?

A. Yes, I think about 1910. I fix this by the period in which I joined the Mitchell-Tappen Co. in 1911. I had a short connection with Mr. Hart in a business way shortly prior to joining the Mitchell-Tappen Co. in 1911.

Q. 98. Will you please describe the tower seen by you at that time in reference to the louver support and give the location of the tower?

A. I recollect now that one of the towers I saw at that time was at the Lackawanna Coal Storage Co. referred to in a previous question.

Q. 99. Will you please describe the method of supporting the louvers in this Lackawanna Cold Storage Tower which you saw prior to 1911? [93]

A. The method of supporting the louvers was that shown in Fig. 4 of my sketch, Plaintiff's Exhibit 14.

Q. 100. Have you one of the old Hart catalogs?

A. I have.

(Deposition of Barton H. Coffey.)

Q. 101. Will you please produce it and state, if you know, when it was published?

A. I cannot state when it was published but it must have been subsequent to 1910 as I find testimonial letters from customers dated 1910 and printed in this catalog.

Q. 102. Can you fix the date of publication any more definitely than that? A. No.

Q. 103. Was that catalog published while you were with Hart?

Objected to as leading.

A. No, I do not think so. As I recollect this catalog came into our possession subsequent to my joining the Mitchell-Tappen Co.

(The catalog produced by the witness is marked Plaintiff's Exhibit 15 for Identification.—J. J. C.)

Q. 104. In answer to question 82 you said that the letter of the Shell Co. to Mitchell-Tappen Co. dated [94] March 29, 1915, was in the files of the company? Have you now found that letter, and if so, will you produce it?

A. I produce the two letters.

(The two letters produced by the witness both dated March 29, 1915, written by Shell Co. of California to Mitchell-Tappen Co. are offered in evidence and marked Plaintiff's Exhibits 16 and 17—J. J. C.)

Q. 105. You were asked yesterday about the date of incorporation of the Cooling Tower Co. have you ascertained the date of incorporation of that company? A. I have.

(Deposition of Louis A. Phillips.)

Q. 106. Please state the date.

A. April 21, 1915, under the laws of the State of New York.

Recess until 2 P. M. [95]

DEPOSITION OF LOUIS A. PHILLIPS, FOR  
DEFENDANT (RECALLED).

LOUIS A. PHILLIPS (Resumed).

Q. 50. Do you recall whether C. F. Braun & Co. asked the Mitchell-Tappen Co. for an agency?

A. I do.

Q. 51. Please state the facts in connection?

A. C. F. Braun & Co. asked us for an agency and I have their letter of May 17, 1915.

(The letter produced by the witness is offered in evidence and marked Plaintiff's Exhibit 18.—J. J. C.)

Q. 52. Have you made an examination in your files for letter of the Union Oil Co. of California to Cooling Tower Co. dated June 14, 1918?

A. I have and have not been able to find the letter.

Q. 53. Do you recall whether such a letter was received?

A. Such letter was received and replied to by me under date of July 1, 1918.

Q. 54. Have you a carbon copy of the letter which you sent? A. I have, and I produce it.

Q. 55. Was this letter sent in the regular course of business of the Cooling Tower Co.?

A. It was. [96]

(Deposition of Louis A. Phillips.)

(The letter produced by the witness is offered in evidence and marked Plaintiff's Exhibit 19.— J. J. C.)

Q. 56. Will you explain the reason for the statement made by you in that letter?

A. The reason for my reply was that we had practically completed arrangements with Mr. Braun to represent us in the California district, on our standard agency agreement and after furnishing Mr. Braun with considerable engineering data, and other information, in regard to cooling towers, he went back on the arrangement we had outlined and suggested that he make the towers himself paying us a royalty of something like 2%, which we naturally refused and after that towers were built by Mr. Braun or the C. F. Braun & Co. so closely following our design and rated capacities that from the pictures we received it was hard to distinguish them from our own.

Adjourned to July, 13/23. [97]

New York, June 13, 1923.

Met pursuant to adjournment.

Present: Counsel as before.

LOUIS A. PHILLIPS (Resumed).

(Answer continued:) Mr. Braun or the C. F. Braun & Co. extended one of the cooling towers greatly increasing its capacity, such extension being made easily possible through our construction on the multiple unit principle. Our design was used for this extension evidently the material being



(Deposition of Louis A. Phillips.)

ordered from the erection plans furnished Braun for the original work. All the material for this extension was purchased by Braun and the installation made without in any way referring the matter to us and we were deprived of any profits which would come to us through this extra work and was a misappropriation of our patents and drawings

I also saw pictures and literature sent out by Mr. Braun or the C. F. Braun & Co. showing our towers at the Shell Co. plant and no reference in this literature to ourselves.

(By Mr. DUNCAN.)

Answer objected to as immaterial, incompetent and as based on secondary and hearsay. [98]

Q. 57. Where was this tower located?

A. At Martinez, Cal.

Q. 58. Do you refer to the Cooling towers erected at the plant of the Shell Co. of California?

A. I do.

Q. 59. Did your company have any knowledge of the extension or enlargement of this tower before the work was done? A. We did not.

Q. 60. How did you learn that the tower which you sold for erection at the plant of the Shell Co. of California had been added to or enlarged?

A. We had tests sent us by the Shell Co. and drawings showing the extended tower.

Q. 61. What was the tower "built for the Dutch Oil interests at their Shell Co. plant" to which you refer in your letter, Plaintiff's Exhibit 19?

(Deposition of Louis A. Phillips.)

A. The two towers which Braun erected at Martinez, California, according to our plans.

Q. 62. Are these the towers referred to in your answer to Q. 56? A. They are.

Q. 63. You state in your letter Plaintiff's Exhibit 19, that your experience in that case did not justify making Braun your regular representative, what did you mean [99] by that?

A. I meant that his way of handling the transaction with us in regard to making him our regular agent was not only not satisfactory but also such that I did not consider honorable.

Q. 64. To what particular action do you refer in your last answer?

A. To the fact that after appearing to be satisfied with our regular agency agreement he wanted to make towers himself to our design on a royalty basis of approximately 2%.

Q. 65. Do you recall what information you had which lead you to believe that Braun tried to procure additional business by using your design?

Objected to as calling for hearsay.

A. The information furnished us by the Shell Co.

Q. 66. Have you any knowledge of the early use of bracket supports for louvers of cooling towers?

A. I have.

Q. 67. What information have you?

A. On all installations made by B. Franklin Hart such bracket supports were used.

Q. 68. Can you describe the supports and the approximate early dates? [100]

(Deposition of Louis A. Phillips.)

A. Hart started building these towers in 1908 and I remember seeing one of his towers during the summer of 1913 at the plant of Elder & Wells, 17th Street & 9th Avenue, New York City, the tower having just been completed and I went to make an inspection of this job as an example of competitive work.

The louvers were supported by angles carried out horizontally from the deck level, the outer ends of these angles being held up by a diagonal brace running back to the tower frames. The tower was of the standard Hart construction.

Q. 69. I show you a copy of the patent to B. F. Hart, Jr., No. 902875 of November 3, 1908. Can you by reference to that patent describe this louver support?

Objected to as leading.

A. The louver support is not clearly shown in the patent drawing. This patent being taken out principally to show the method of leading off the water dripping from the lower. The method of support is the usual triangular support as used in construction work for centuries.

Q. 70. Will you please describe what you refer to as the usual triangular support?

A. A horizontal member fastened to a vertical member with an inclined member fastened to another point in [101] the horizontal member and carried back to a lower point in the vertical member.

Q. 71. Have you knowledge of the use of such a structure?

(Deposition of Louis A. Phillips.)

A. Yes, it is used in a great many ways; in fact is the form used for supporting the shelf on the wall and eaves on a house and a thousand such applications.

Cross-examination by Mr. DUNCAN.

XQ. 72. What was the construction of the deck members of the Hart tower that you saw at Elder & Wells in 1913?

A. They were made of galvanized iron formed in accordance with Hart's standard design.

XQ. 73. Did the method of construction of supporting the louver construction of the Hart tower that you saw in 1913 correspond with the method shown in Hart patent 902875?

A. The patent does not clearly show the method of supporting the louvers.

XQ. 74. Do you mean that it doesn't show any method of supporting the louver or that you cannot understand the method shown in the patent?

A. The patent does not cover louver supports.

XQ. 75. Do figures 3 and 4 of the Hart patent illustrate the method of supporting the louver?  
[102]

A. They do not. They merely indicate it.

XQ. 76. In these figures 11 indicates the louvers, does it not? A. It indicates the louver.

XQ. 77. And 11' indicates a series of straps or braces bolted at one end to the frame of the tower and at the other end to the top of the louver, does it not? A. It does.

XQ. 78. And 11' also indicates, does it not, straps



(Deposition of Louis A. Phillips.)

or braces extending from the bottom of the louver to the lower level of the tower?

A. No. It indicates straps from both the lower and upper edges of the louver.

XQ. 79. These figures show two sets of independent straps or braces each marked 11', one set extending at a slight angle from the top of the louver to the frame of the tower at the point slightly above the top of the louver and the other set of straps or braces extending at a downward angle from the bottom of the louver to a point on the framework of the tower below the louver; is that right?

A. The straps shown in the figure are a part of the louver bracing. [103]

Q. 80. There are two independent sets of such straps or braces shown in Figures 3 and 4 of the Hart patent, are there not. One set connected with the top of the louver and the other set at the bottom?

A. One set at the top and the other set approximately halfway up. The patent drawing is not clear as to whether it refers to a strap or a part of the louver and the louver itself, if stiff enough, can be used as the inclined member of the triangular support as a part of the iron of support.

Q. 81. Now, I am asking you, Mr. Phillips, not what this Hart patent might show, but what it does show. Is it not a fact that the drawings of this patent show the louver terminating with the curved portion 15 below which is a strap or brace or sup-



(Deposition of Louis A. Phillips.)

port 11' which is separate from and bolted to the louver 11 at the lower end of the louver?

A. The patent drawing may show such construction but does not show the Hart method of supporting the louvers.

Q. 82. When did you first see a Hart Cooling Tower in actual form either under construction or finished?

A. The actual tower at the Elder & Wells Co. was seen by me and inspected during the summer of 1913 and prior to that I saw several Hart installations from the time they started to make installations in 1908.

Q. 83. Where did you first see an actual Hart tower? [104]

A. One of the first I saw was on a brewery. but I could not give the name and location without making inquiries.

Q. 84. Are you prepared to say, Mr. Phillips, that the regular Hart Cooling Tower construction in use from 1908 to 1918 did not involve a support for the louver which consisted of two separate sets of braces, one connecting the bottom of the louver with the framework of the tower below the bottom of the louver and the other connecting the upper portion of the louver with a higher part of the framework of the tower?

A. There may have been some slight differences in attaching the louvers to the tower, but invariably a horizontal brace was thrown out at about the deck level and this brace held in a horizontal position by

(Deposition of Louis A. Phillips.)

an inclined brace running back to the frame and in some cases there were strips running from the louvers to the frame at more points.

Q. 85. Are you prepared to say, Mr. Phillips, that the regular Hart construction during the period referred to in the last question did not involve one set of upwardly inclined louver braces near the top of the louver and a separate set of downwardly inclined louver braces connecting the bottom of the louvers with the framework of the tower at a point below the connection with the tower of the upper set of braces? [105]

A. In the towers I inspected there was an additional diagonal brace running from the horizontal support back to the tower frame.

Q. 86. The towers that you inspected did involve the construction pointed out in my last question, did they not? Even though they may have had additional braces for the louvers?

A. I do not remember any extra horizontal brace at the lower part of the louver.

Q. 87. My question did not involve an extra horizontal brace at the bottom of the louver, but referred only to a downwardly inclined brace at the bottom of the louver. With that understanding, please state whether the Hart towers that you inspected did not involve the louver supporting braces at the top and at the bottom of the louver such as specified in my question 85.

A. As I understand your question, not in the manner referred to.

(Deposition of Louis A. Phillips.)

Q. 88. Did not the Hart Towers that you inspected have one set of braces or supports connecting the top portion of the louver with an adjacent portion at the frame of the tower?

A. Perhaps I can answer your question by stating that the inclined member of the brace which followed the incline of the louver was fastened to the frame at the bottom of the [106] louver and was held out from the tower by the horizontal member at about deck level of the tower running out to a point near the top of the louver, although not at the very edge.

XQ. 89. When was it that, according to your understanding, Mr. Braun, as you say, practically agreed to the agency arrangement?

A. At the time of his call on us in New York.

XQ. 90. When was that?

A. I can only fix the date by the correspondence.

XQ. 91. Please do so.

A. During the year 1915.

XQ. 92. How do you fix that time?

A. By various letters such as his of May 17th, 1915, Plaintiff's Exhibit 18.

XQ. 93. And where was it or how was it that, according to your claim, Mr. Braun practically agreed to the agency arrangement? By correspondence or by personal conference in New York or elsewhere?

A. Largely through personal conference at our office, then at 50 Broad Street, New York City.

XQ. 94. During what time did the conferences at

(Deposition of Louis A. Phillips.)

your New York office take place at which you think Mr. Braun practically agreed to the agency arrangement?

A. I do not notice anything in the correspondence [107] fixing the exact date that Mr. Braun was in our office, but the correspondence indicates that it was some time during the period covered from April to June, 1915.

XQ. 95. Was it while Mr. Braun was at your New York office that he declined to enter into the agency or arrangement?

A. It is not quite clear in my mind whether it was just as he was leaving New York or whether the statement was made later or not.

XQ. 96. Was the proposed agency arrangement as desired by you covered by correspondence, and if so, can you produce the correspondence?

A. It was and we sent him a copy of our standard agency agreement.

XQ. 97. Have you produced and put in evidence the letters covering your correspondence in regard to the proposed agency arrangement?

A. I do not think all our correspondence with Braun in regard to the agency matter have been put in evidence.

XQ. 98. Have you any letter from Mr. Braun declining the agency proposition made by you?

A. Yes, we had a letter returning the agency agreement made out for him.

XQ. 99. What is the date of that letter, please?

[108]



(Deposition of Louis A. Phillips.)

A. I cannot find it at this time.

XQ. 100. You have your letter files of correspondence with Mr. Braun present, have you not?

A. A large portion.

XQ. 101. And before making your answer to question 99, you spent considerable time going through the correspondence files, did you not? A. I did.

XQ. 102. Are you perfectly sure that Mr. Braun declined the agency arrangement by letter or did he decline it at your office in New York?

A. To the best of my recollection, the final rejection was in a letter sending back the agency agreement to us.

XQ. 103. And that was before he came to New York, was it not? A. No, after.

XQ. 104. When and how did you discuss with Mr. Braun the arrangement that you described as building your towers on a royalty basis? Was that by correspondence or by personal interview and in either case, when?

A. My recollection of that particular point is not clear and as I before stated it may have been just as he was leaving New York or it may be by letter written afterwards. [109]

XQ. 105. When was it that you sold the two Shell Oil Co. towers that you have testified about?

A. In May, 1915.

XQ. 106. To whom were those sold by your company?

A. They were sold to C. F. Braun & Co., that is we entered into arrangements with C. F. Braun &



(Deposition of Louis A. Phillips.)

Co. to buy the lumber locally, and the metal parts of the tower from us in New York.

XQ. 107. And the Braun Co. paid you for such portions of the towers as you furnished?

A. Yes.

XQ. 108. Have you the contract or letters covering the contract in regard to the purchase by Braun of those two towers?

A. I have a telegram from the C. F. Braun & Co. dated May 10th, 1915, received by us on May 11th, constituting the order.

XQ. 109. Have you got your reply to that telegram? And have you also the letter from Braun to you mentioned in the telegram and your reply to that letter?

A. I presume we have and can be found in the files. [110]

XQ. 110. Do I understand that you complain of the alleged fact that Braun & Co. enlarged or had something to do with the enlargement of one or more of the Shell Oil Company's cooling towers that were originally furnished in part by you to Braun & Co. in the early part of 1915, it being your belief that the enlargement included features covered by your patents? A. Yes.

XQ. 111. And what features included in such enlargement do you claim to be an infringement of your patents in suit?

A. The parts referred to in the patent in suit are the drip bars and the way they are splined together although I also had in mind the use of

(Deposition of Louis A. Phillips.)

our drawing, and the steel frame supporting the louvers.

XQ. 112. Do you charge the defendant in this case with having had anything to do with the erection of any other towers and the two Shell towers or their enlargements that embody inventions of your patent in suit?

Objected to on the ground that this is not a proper method of obtaining the information sought and the opinion of the witness as to what constitutes infringement is irrelevant and immaterial and not binding on the plaintiff.

A. Wherever the Braun Co. have used methods of [111] separating the drip bars with device to spacing them in the same principal as covered by our splines in all installations covered by this suit.

XQ. 113. Do you claim that except in connection with the two Shell Oil Co. Cooling Towers, the Braun Company has used decks consisting of drip bars that are loosely splined together at intervals as shown in your patent? A. I do.

XQ. 114. You seriously mean, Mr. Phillips, that you believe that The Braun Co. have never made any towers except the Shell Oil Co. towers where the drip bars have been joined together by loose splines connected the adjacent bars?

A. I do not know what you mean by loose splines?

XQ. 115. You know what a spline is, don't you?

A. Yes.

XQ. 116. Please state what it is?

(Deposition of Louis A. Phillips.)

A. A spline is a piece of material put in between two other pieces of material to hold them the right distance apart.

XQ. 117. You wouldn't call a bolt that ran into two pieces of material and held them a certain distance apart a spline, would you?

A. A bolt might or might not be a spline.

XQ. 118. What would be necessary to make the [112] portion that separates and yet connects the two other members a spline?

A. I should say this spacing feature.

XQ. 119. And it is your understanding that any member that spaces apart two other members is a spline? A. Not unless it holds them in position.

XQ. 120. And is it your understanding that any member that connects two other members and yet spaces them apart is a spline irrespective of the way the spacing member is connected with or contacts with the two members spaced apart?

A. I cannot think of an exception at the present time.

XQ. 121. According to your understanding of the word "spline" would a wooden block that is nailed to two drip bars, one on each side, spacing them apart be a spline?

A. I should think it might readily be a spline.

XQ. 122. Are you an engineer by profession?

A. I am a graduate engineer with degree of Mechanical Engineer and while for the last few years I have handled almost entirely the business

(Deposition of Barton H. Coffey.)

end, I still claim to know something about engineering.

Adjourned to June 14, 1923,—10 A. M. [113]

Met pursuant to adjournment.

June 14, 1923.

DEPOSITION OF BARTON H. COFFEY, FOR  
PLAINTIFF (RECALLED—CROSS-EXAM-  
INATION).

Cross-examination of Mr. COFFEY.

XQ. 107. Is it not a fact that prior to your patent for the invention set forth in your patent other cooling tower manufacturers were using wooden drip bars in atmosphere cooling towers? A. Yes.

XQ. 108. Who to your knowledge were using wooden drip bars prior to your invention?

A. They were used in what is technically known as slat towers, working on an atmospheric principle.

XQ. 109. By what concerns were such wooden drip bars or slats used in atmospheric cooling towers prior to the invention of your patent in suit?

A. They were not manufactured by specialized cooling tower companies, but were erected by the owners. There are a number of examples throughout the West in the stockyards of Chicago, Cincinnati and other places.

XQ. 110. Did Edwin Burhorn use wooden slats or drip bars in his cooling towers prior to your invention of the patent in suit? A. I know of none.

XQ. 111. What kind of drip bars did he use?

(Deposition of Barton H. Coffey.)

A. I don't think he used any drip bars prior to my patent. He used a perforated pan with drip strips riveted on the under side of the pan in accordance with the [114] Ostendorff patent.

XQ. 112. Referring to the wooden drip bar atmospheric cooling towers in which you are familiar prior to your invention of the patent in suit, please state whether these drip bars were spaced apart so that there were openings between the adjacent drip bars?

A. The slats were principally boards from six to eight inches wide nailed to the cross members of the tower with openings between the boards from half to three-quarters of an inch, I think, roughly.

XQ. 113. In some instances were these slats connected together by blocks or strips, at points intermediate the ends of the strips?

A. I never saw any connections between slats at either side.

XQ. 114. How long have you known Mr. Braun personally?

A. I met Mr. Braun only once on his visit to our office in New York.

XQ. 115. Did you attend a meeting of the A. S. R. E. at Buffalo in June, 1915?

A. I don't recollect it.

XQ. 116. Do you recall a meeting held in Buffalo in June, 1915?

A. It seems to me there was a meeting. [115]

XQ. 117. Didn't Mr. Braun read a paper during



(Deposition of Barton H. Coffey.)

the spring or summer of 1915 before the A. S. R. E. on atmospheric cooling towers?

A. I have no recollection of such paper.

XQ. 118. Have you recollection of any paper read or contributed by Mr. Braun to the A. S. R. E. on that subject? A. I have not.

XQ. 119. What was the first cooling tower erected by B. Franklin Hart that you had personal knowledge of?

A. I could not answer that question. I have seen a great many of his towers and at this late date the exact dates when I saw the towers is not in my mind at all, I only know in a general way a few towers whose location I do remember and the time of observation of these towers is only fixed approximately in relation to other matters.

XQ. 120. Fix approximately the best you can the time when you first saw a Hart Cooling Tower?

A. The best of my recollection when I first saw the Hart Cooling Tower is approximately 1910. I have already testified in direct examination regarding the places and the approximate dates when I saw these towers. [116]

XQ. 121. Were the Hart Towers with which you are familiar built in accordance with the disclosure of the Hart Patent, 902,875 which I now show you?

A. They were not.

XQ. 122. Were they built in accordance with the disclosures of the Hart catalog that you produced and put in evidence? A. They were.

XQ. 123. Did the Hart Towers with which you

(Deposition of Barton H. Coffey.)

are familiar have a set of supporting strips or braces that ran from the framework of the tower to a point near the top of the louver?

A. Not very near the top. The way they ran was horizontally from the level of the deck and joined the inclined brace at some point below the top as shown in the photograph of the catalog.

XQ. 124. Did the louvers of the Hart Tower with which you are familiar have strips of supporting braces extending downwardly from the bottom of the louver to a point on the frame? A. They did.

XQ. 125. Did the louvers of the Hart Towers with which you are familiar have any braces or supports connected with the louver near the top and extending at an angle to the horizontal to its point of connection with [117] the frame?

A. Yes, they did. They had an inclined angle extending from the top of the louver and connected with the frame at the bottom of the louver, the louver itself generally consisted of thin sheet iron bolted or otherwise fastened to the outside of the inclined angle.

XQ. 126. Were the braces or supports that were connected with the louver near the top separate and independent pieces from the braces or supports that extended from the bottom of the louver to the frame?

A. Yes, separate pieces, I recollect.

XQ. 127. Were the upper braces or supports short pieces of iron or steel that were bolted at one end

(Deposition of Barton H. Coffey.)

to the frame and at the other to a point near the top of the louver?

A. I presume you mean the horizontal members; these were bolted on the inner end to the frame in a line with the decks at the outer end to the inclined angles which in turn supports the louver, the louver itself being supported by inclined members.

XQ. 128. Have you personal knowledge of the method that was used to connect together the slats or drip bars in the two Shell Oil Co. towers erected by Braun in 1915? [118] A. No.

XQ. 129. Have you personal knowledge of the method that was used in connecting the slats or drip bars of the additions or enlargement of these towers? A. No.

Redirect Examination by Mr. FOULDS.

RD. Q. 130. In answer to XQ. 39, you said that you had designed a number of modifications, have you the drawing of any modification made by you, and if so, will you please produce it?

A. I produce plan 441 dated May 15, 1919, a thousand gallon tower erection plan 441 Newaygo Portland Cement Co., Newaygo, Michigan. This tower is designed to handle an extremely corrosive water and it was specified by the Cement Co. that all metallic connections, as nails, bolts, etc., of any kind whatever to be excluded and that all connecting devices wood, consequently all joints at intersections of structural members were made by large pins of wood and the deck members, drip bars and

(Deposition of Barton H. Coffey.)

other smaller wooden members were fastened with locust tree nails.

The section LL shows a main transverse braced frame in which the angle brackets supporting the louvers are made a part of the diagonal bracing for supporting the structure [119] as a whole against wind pressure and other stresses.

The section EE is through the end of the tower as indicated on the plan and shows the angle brackets at deck levels used at both ends of the tower.

RD. Q. 131. Will you please identify the bracing for the louvers on the section LL, in this plan 441?

A. At the top louver we have a horizontal brace LP-12 connected through the prime brace LP-13, the lower end of which is connected at deck level at the splice between member LP-15 and LP-10. The remaining louvers are slightly different from the upper louvers; in this case the upper member LP-15 instead of being horizontal like LP-12 it is inclined at the angle of the diagonal frame brace LP-10. Inclined member LP-13 is bolted at the top to member LP-15 and at the lower end at the splice between LP-15 and LP-10 in the same manner as the map describes from the louver above and so on with the rest.

RD. Q. 132. Can you identify the louvers on this plan 441?

A. The louver boards are shown in elevation at the view marked "End Elevation" also in section at the view marked "Section EE," they consist of one by six, T & G boards secured to the inclined



(Deposition of Barton H. Coffey.)

members LP-13, section LL [120] and LP-6, Section EE. They extend completely around the tower as indicated in view marked "Plan CC."

RD. Q. 133. How are the louvers connected to the braces at LP-13?     A. By *a* locust tree nails.

RD. Q. 134. How are the louvers positioned with reference to the braces LP-13?

A. The braces LP-13 are carried by the brace frames as formerly explained. These frames being spaced longitudinally at intervals of five feet ten inches as shown in Plan DD. On the ends of the tower they are supported by two frames spaced five feet eight, the frames being illustrated in section EE in the spacing plan DD. At the four corners are special triangle frames having inclined members CPA conforming with the inclined members on the sides and ends of the tower. When these inclined members are planked, a perfect miter joint, retained at each corner forming of each complete louver a short truncated hollow pyramid. With its smaller end beneath the larger one.

RD. Q. 135. Was this drawing actually made at the date which it bears, May 15, 1919?

A. It was.

(The drawing produced by the witness is offered in evidence and marked Plaintiff's Exhibit 19a, Drawing No. 441.—J. J. C.) [121]

(By Mr. DUNCAN.)

The exhibit and the testimony concerning the same objected to as incompetent, irrelevant and immaterial.



(Deposition of Barton H. Coffey.)

It is stipulated that a blue-print of Plaintiff's Exhibit 19 be substituted for the original produced by the witness without waiver of objections.

RD. Q. 136. Do you know, of your own knowledge, whether a tower in accordance with this drawing No. 441, Plaintiff's Exhibit 19, was actually constructed? A. I do not.

RD. Q. 137. What knowledge have you as to the use made of this drawing and the tower shown therein?

Objected to as incompetent.

A. All the lumber, pins, tree nails, etc., entering the tower were manufactured and fabricated by us, that is, all holes were bored in the members and all members were cut the proper length and material shipped to the purchaser, Newaygo Portland Cement Co., Newaygo, Michigan.

RD. Q. 138. When was that done?

Objected to as not calling for the best evidence.

A. The fabrication began shortly after the completion of detailed drawing on or about the date of plan 441. [122] The dates of shipment I do not now recollect, but can produce same after consulting the records of the Cooling Tower Co. if necessary.

(The catalog produced by the witness in answer to XQ. 60 is offered in evidence and marked Plaintiff's Exhibit 20, Plaintiff's Catalog.—J. J. C.)

Cross-examination by Mr. DUNCAN.

XQ. 139. Are the drip bars used in the Newaygo Construction shown on Exhibit 19 connected by

(Deposition of Barton H. Coffey.)

wooden splines fitting into grooves on the vertical walls of the adjacent drip bars? A. They were.

XQ. 140. Is that the method of connecting and spacing the drip bars that your company has regularly used while you have been connected with it?

A. It has.

XQ. 141. In all the cooling towers made by your company and its predecessor since your connection with it, have the drip bars been connected together or spaced apart by means of wooden splines fitting into grooves on the vertical walls of the adjacent drip bars?

A. The best of my knowledge and belief, they have. [123]

Deposition of Mr. Coffey closed.

BARTON H. COFFEY.

Sworn to before me,

JOHN J. COYLE,

Notary Public.

DEPOSITION OF LOUIS A. PHILLIPS, FOR  
DEFENDANT (RECALLED — CROSS-EX-  
AMINATION).

Cross-examination of Mr. PHILLIPS (Resumed).

XQ. 123. Have you knowledge of the method used by Mr. Braun in connecting and spacing the part the drip bars in the original two Shell Oil Co. Towers erected in 1915, material for which he purchased from your company?

A. I have not seen the towers. My knowledge on the subject being derived from the fact that the

(Deposition of Louis A. Phillips.)

towers are supposed to be built in accordance with our plan. Instructions for erection having been sent to Braun.

XQ. 124. What is your knowledge as to the extent and detail of construction of the additions or enlargements of the two Shell Towers?

A. My knowledge of the subject comes through correspondence with the purchasers of the towers, reports of our representatives and through the fact that this tower could not very well be extended except by employing the same method of construction as shown on our plan.

XQ. 125. Is it your understanding that the extensions or enlargements of these two Shell Oil Co. towers are provided with drip bars, the sides of which have grooves [124] into which fit wooden splines spacing apart in connecting the adjacent drip bars? A. I so understand.

XQ. 126. When did you first learn of the erection of extensions or additions to the two cooling towers of the Shell Oil Co.?

A. I had reports of this prior to June 24, 1919, when the matter was confirmed through correspondence with the Shell Co.

XQ. 127. When were the extensions erected?

A. I cannot recollect the exact dates as you will bear in mind that I testified that Braun did not advise us as to the extension to the towers.

XQ. 128. Did you know of the extension to these Shell Co. towers the time you wrote your letter of July 1st, 1918, to the Union Oil Co.? (Exhibit 19.)

(Deposition of Louis A. Phillips.)

A. I cannot be positive of this date, but my recollection is that such additions had been reported to me.

XQ. 129. Have you sent to other concerns besides the Union Oil Co. who have purchased or contemplated the purchase of Braun Towers, letters similar in tenor to Exhibit 19, warning them against infringement of your patent in suit by the purchaser of Braun Towers?

Objected to as not proper cross-examination and defendant's counsel is advised that by pursuing this inquiry he will make [125] this witness his own witness.

A. I have looked through the files and have not found such letters as referred to in the question.

Redirect Examination by Mr. FOULDS.

RD. Q. 130. You were asked on cross-examination to produce the correspondence with defendant relative to the purchase of the Shell Co. towers; have you made a search for this correspondence, and if so, please state what you have found?

A. I have, and I have found a number of letters not offered in evidence. The letters offered in evidence show that Mr. Braun having previously sold cooling towers for the Alberger Pump and Condenser Co. then solicited our agency and carried the correspondence along chronologically through our letter of April 15, 1915, marked Exhibit 8, and from that letter a number of important communications have been omitted. Braun telegram of April 20, 1915, states that he now has inquiries from the Shell



(Deposition of Louis A .Phillips.)

Co. for one tower of forty thousand and one for eighty thousand gallons capacity gives atmospheric conditions and asks for price on special parts.

Without going into these letters in detail I produce the file of correspondence between ourselves and C. F. Braun [126] these letters and telegrams were respectively received and mailed in the regular course of business.

The letters produced by the witness are offered in evidence.

Subject to objections to relevancy, materiality and competency of the letters referred to and subject to comparison by counsel in San Francisco it is stipulated that plaintiff's counsel may list the letters which he now desires to offer in evidence, have copies of the same made and substitute the copies for the originals, it being understood that the entire correspondence not already offered will be offered in this connection and that objections of the character above referred to will be taken by San Francisco counsel at or before the trial.

(I offer in evidence letter written by Andrew Foulds, Jr., to Dewey, Strong & Townsend, dated September 4, 1918.—J. J. C.)

It is stipulated that if Mr. Andrew Foulds, Jr., were called as a witness he would testify that no answer was received by him to the letter of September 4, 1918, Plaintiff's Exhibit 22.

It is further stipulated that from the offering of



the copies of letters above referred to the deposition of the witness Phillips is closed.

LOUIS A. PHILLIPS.

Sworn to before me.

JOHN J. COYLE,

Notary Public. [127]

The letters produced by the witness, Louis A. Phillips, are offered in evidence on behalf of the plaintiff as follows:

Letter written by Mitchell-Tappen Co. to C. F. Braun & Co. dated November 27, 1914, being Plaintiff's Exhibit No. 4 for identification and the same is marked Plaintiff's Exhibit No. 4.—J. J. C.

Letter written by Mitchell-Tappen Co. to C. F. Braun & Co. dated December 30, 1914, being Plaintiff's Exhibit No. 6 for identification and the same is marked Plaintiff's Exhibit No. 6—J. J. C.

Letter written by Mitchell-Tappen Co. to C. F. Braun & Co. dated February 27, 1915, being Plaintiff's Exhibit No. 7 for identification, and the same is marked Plaintiff's Exhibit No. 7.—J. J. C.

Letter written by Mitchell-Tappen Co. to Shell Co. of California, dated April 5, 1915, being Plaintiff's Exhibit No. 8 for identification and the same is marked Plaintiff's Exhibit No. 8.—J. J. C.

Telegram from C. F. Braun & Co. to Mitchell-Tappen Co. dated San Francisco, April 20, 1915, and the same is marked Plaintiff's Exhibit No. 23.—J. J. C.

Telegram written by Mitchell-Tappen Co. to C. F. Braun & Co. dated New York, 4-21-15, and the same is marked Plaintiff's Exhibit No. 24.—J. J. C.

Letter written by Mitchell-Tappen Co. to C. F. Braun & Co. dated April 21, 1915, being Plaintiff's Exhibit No. 9 for identification and the same is marked Plaintiff's Exhibit No. 9.—J. J. C. [128]

Telegram sent by C. F. Braun & Co. to Mitchell-Tappen Co. dated San Francisco, April 27, 1915, and the same is marked Plaintiff's Exhibit No. 25.—J. J. C.

Telegram sent by Mitchell-Tappen Co. to C. F. Braun & Co. dated New York, April 28, 1915, and the same is marked Plaintiff's Exhibit No. 26.—J. J. C.

Letter written by Mitchell-Tappen Co. to C. F. Braun & Co. dated April 28, 1915, and the same is marked Plaintiff's Exhibit No. 26a.—J. J. C.

Telegram sent by C. F. Braun & Co. to Mitchell-Tappen Co. dated San Francisco, May 10, 1913, and the same is marked Plaintiff's Exhibit No. 27.—J. J. C.

Telegram sent by Mitchell-Tappen Co. to C. F. Braun & Co. dated May 11, 1915, and the same is marked Plaintiff's Exhibit No. 28.—J. J. C.

Telegram sent by C. F. Braun & Co. to Mitchell-Tappen Co., dated San Francisco May 12, 1913, and the same is marked Plaintiff's Exhibit No. 29.—J. J. C.

Telegram sent by Mitchell-Tappen Co. to C. F. Braun & Co., dated May 13, 1915, and the same is marked Plaintiff's Exhibit No. 30.—J. J. C.

Letter written by Mitchell-Tappen Co. to C. F. Braun & Co. dated May 13, 1915, and the same is marked Plaintiff's Exhibit No. 31.—J. J. C.

Letter written by Mitchell-Tappen Co. to C. F. Braun & Co. dated May 14, 1915, and enclosures Mitchell-Tappen Co. to the Shell Co. dated May 14, 1915, and the same is marked Plaintiff's Exhibit No. 32.—J. J. C.

Letter written by Mitchell-Tappen Co. to C. F. Braun & Co. dated May 14, 1915, and the same is marked Plaintiff's Exhibit No. 33.—J. J. C. [129]

Letter written by C. F. Braun & Co. to Mitchell-Tappen Co. dated May 20, 1915, and the same is marked Plaintiff's Exhibit No. 34.—J. J. C.

Letter written by Mitchell-Tappen Co. to C. F. Braun & Co. dated May 22, 1915, and the same is marked Plaintiff's Exhibit No. 35.—J. J. C.

Letter written by Mitchell-Tappen Co. to C. F. Braun & Co., dated May 27, 1915, and the same is marked Plaintiff's Exhibit No. 36.—J. J. C.

Telegram sent by C. F. Braun & Co., to Mitchell-Tappen Co., dated San Francisco, May 8, 1915, and the same is marked Plaintiff's Exhibit No. 37.—J. J. C.

Telegram sent by Mitchell-Tappen Co. to C. F. Braun & Co., dated New York, May 29, 1915, and the same is marked Plaintiff's Exhibit No. 38.—J. J. C.

Letter sent by Mitchell-Tappen Co. to C. F. Braun & Co., dated May 31, 1915, and the same is marked Plaintiff's Exhibit No. 39.—J. J. C.

Letter written by C. F. Braun & Co. to Mitchell-Tappen Co. dated June 21, 1915, and the same is marked Plaintiff's Exhibit No. 40.—J. J. C.

Telegram sent by C. F. Braun & Co. to Mitchell-

Tappen Co. dated San Francisco June 3, 1915, and the same is marked Plaintiff's Exhibit No. 41.—J. J. C.

Telegram sent by Mitchell-Tappen Co. to C. F. Braun & Co., dated June 4, 1913, and the same is marked Plaintiff's Exhibit No. 42.—J. J. C.

Letter written by Mitchell-Tappen Co. to C. F. Braun & Co. dated June 4, 1915, and the same is marked Plaintiff's Exhibit No. 43.—J. J. C. [130]

Letter written by C. F. Braun & Co. to Mitchell-Tappen Co. dated June 14, 1915, and the same is marked Plaintiff's Exhibit No. 44.—J. J. C.

Letter written by C. F. Braun & Co. to Mitchell-Tappen Co. dated June 17, 1915, and the same is marked Plaintiff's Exhibit No. 45.—J. J. C.

Letter written by Mitchell-Tappen Co. to C. F. Braun & Co. dated June 23, 1915, and the same is marked Plaintiff's Exhibit No. 46.—J. J. C.

Letter written by The Cooling Tower Co., Inc., to C. F. Braun & Co. dated July 19, 1915, and the same is marked Plaintiff's Exhibit No. 47.—J. J. C.

Sworn to and subscribed before me this 14th day of June, 1923.

[Seal]

JOHN J. COYLE,

Notary Public, New York County. [131]

State of New York,  
County of New York,—ss.

I, John J. Coyle, a notary public, in and for the county of New York and State of New York, do hereby certify that the foregoing depositions of Barton H. Coffey and Louis A. Phillips, were taken on behalf of Cooling Tower Co., Inc., the plaintiff,



in pursuance of the notice hereto annexed, before me, at No. 120 Liberty Street, in the Borough of Manhattan, in the city of New York, county of New York and State of New York, on June 6th, 11th, 13th and 14th, 1923. That the said witnesses were by me severally sworn before the commencement of their testimony; that the testimony of the said witnesses was taken by Miss Agnes Creamer directly on the typewriter in my presence; that the defendant, C. F. Braun & Co., was represented by Frederick S. Duncan, Esq., who was present during the taking of said testimony; that said testimony was taken at the place aforesaid on the days above stated. That I am not connected by blood or marriage with either of said parties nor interested directly or indirectly in the matter in controversy.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my seal of office at the city of New York, county of New York and State of New York, this 14th day of June, 1923.

[Seal]

JOHN J. COYLE,  
Notary Public. [132]

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(Title of Court and Cause.)

NOTICE RE TAKING DEPOSITIONS DE  
BENE ESSE OF LOUIS A. PHILLIPS ET  
AL.

To Charles E. Townsend, Attorney for Defendant.

Please take notice that on the 6th day of June, 1923, at ten o'clock in the forenoon, the deposition



*de bene esse* of Louis A. Phillips of Hastings-on-Hudson in the county of Winchester and State of New York, Barton H. Coffey, of the city of New York, county of New York and State of New York, A. Bonell Tappen of Briarcliff Manor, in the county of Winchester and State of New York, and William F. Mitchell of Nutley, in the County of Essex and State of New Jersey, will be taken on behalf of the plaintiff herein, by John J. Coyle, Esq., notary public, in and for the county of New York, State of New York or other proper officer who is not of counsel or attorney to either of the parties, nor interested in the event of the cause, at his office, room 900, No. 120 Liberty Street, in the Borough of Manhattan, city of New York, county of New York and State of New York.

The said witnesses reside at the places above stated, more than one hundred miles from the place where the trial of this action will occur.

The examination of said witnesses will proceed from day to day until completed and will be taken under sections 863, 864, 865, Revised Statutes of the United States.

Dated, New York, May 1st, 1923.

EDWARD A. O'BRIEN,  
ASHLEY and FOULDS,  
Attorneys for Plaintiff.

Receipt of copy of within notice acknowledged this 16th May, [133] 1923.

CHAS. E. TOWNSEND,  
WM. A. LOFTUS,  
Attys. for Deft.

[Endorsed]: Filed Nov. 26, 1923. Walter B. Maling, Clerk. By J. A. Schaertzer, Deputy Clerk.  
[134]

In the Southern Division of the United States District Court for the Northern District of California, Second Division.

Before Honorable JOHN S. PARTRIDGE, Judge.  
No. 923—IN EQUITY.

COOLING TOWER COMPANY, INC., a Corporation,

Plaintiff,

vs.

C. F. BRAUN & COMPANY,

Defendant.

Tuesday, November 27, 1923.

Wednesday, November 28, 1923.

Friday, November 30, 1923.

Tuesday, December 4, 1923.

## REPORTER'S TRANSCRIPT.

### INDEX.

	Direct	Cross	Re-D.	Re-X.
Walter Hagenbuch .....	3	5		
Carl F. Braun .....	8	36	71	
Chas. H. Shattuck .....	103	117		
C. F. Braun (Recalled).....	123	129	136	155
			162	
Chas. Moser .....		165	176	179
C. F. Braun (Recalled).....	182	183		
do. do. ....	187	192		

PLAINTIFF'S EXHIBITS:

	Page
48 Patent to Mitchell-Tappen Co. No. 1,010,020, dated Nov. 28, 1911 .....	2
49 Cut from Catalog, Defendant's Ex. "C".....	33
50 Patent to Coffey, No. 1,158,107, Oct. 26, 1915.....	76
51 Blue-prints for Shell tower construction .....	76
52 Letter, Braun & Co. to Cooling Tower Co., Aug. 12, 1915 .....	77
53 Letter, Braun & Co. to Cooling Tower Co., Nov. 26, 1915 .....	77

DEFENDANT'S EXHIBITS:

A (For identification) Blue-print .....	7
B Braun patent No. 1,334,515, dated March 23, 1920....	8
C Catalog, Bulletin 101, of C. F. Braun & Co.....	27
D Model, showing construction erected for Shell Co. in 1920 .....	36
E Model of tower erected for Shell Co. in 1920.....	40
F Model representing detail of upper distributing deck.	42
G Model illustrating original 1915 Shell Construction...	48
H Model illustrating construction of deck.....	48
I Model .....	48
J Enlargement Coffey drawings .....	48
K Sketch illustrating angle iron construction.....	52
L General Catalog of C. F. Braun & Co. Copyrighted 1923 .....	54
M Braun patent 1,442,784, Jan. 16, 1923.....	90
N File Wrapper and Contents do. ....	90
O Patent to Burhorn, 1,182,635, May 9, 1916.....	90
P Patent to Burhorn, 1,234,444, July 24, 1917.....	90

Index (Continued)—

## DEFENDANT'S EXHIBITS:

Q	Patent to Hart, 902,875, Nov. 3, 1908.....	90
R	Patent to Burhorn, 973,163, Oct. 18, 1910.....	91
S	Patent to Hart, No. 1,228,207, May 29, 1917.....	91
T	Patent to Schmidt, No. 693,625, Feb. 18, 1902.....	91
U	File-wrapper of first Braun patent of 1920.....	92
V	Patent to Stocker, 700,990, May 27, 1902.....	92
W	Patent to Wheeler and Pratt, No. 821,561, May 22, 1906 .....	92
X	Patent to Morrison, 965,116, July 19, 1910.....	92
Y.	Patent to Fischer, 649,573, May 15, 1900.....	92
Z	Patent to Burhorn, 1,040,875, Oct. 8, 1912.....	92
AA	French patent No. 359,426.....	92
BB	British patent to Hebbs, No. 25,449, Nov. 12/05....	92
CC	British patent to Pomall, No. 21,711, Sept. 23, 1909.	92
DD	Patent to Coffey, No. 1,010,020, Nov. 28, 1911.....	93
EE	Patent to Cooper, 140,680, July 8, 1873 .....	93
FF	Patent to Mills, 463,702, Nov. 24, 1891 .....	93
GG	Patent to Southwick, 303,334, Aug. 12, 1884 .....	93
HH	Patent to Andrews, 544,202, Aug. 6, 1894 .....	93
II-1	Patent to Windhausen, No. 111,292, Jan. 24, 1871..	93
2	Patent to Hanisch, No. 477,755, June 28, 1892.....	93
3	Patent to Stocker, No. 700,990, May 27, 1902.....	94
4	Patent to Wheeler et al., 707,042, Aug. 12, 1902....	94
5	Patent to Halsall, No. 683,933, Oct. 8, 1901.....	94
6	Patent to Ostendorff, 661,192, Nov. 6, 1900.....	94
7	do. 697,160, Apr. 8, 1902.....	95
8	Patent to Ostendorff, 836,702, Nov. 27, 1906.....	95
9	Patent to Burhorn, 772,780, Oct. 18, 1904.....	95
10	Patent to Burhorn, 961,100, June 14, 1910.....	95
11	Patent to Burhorn, 1,014,371, Jan. 9, 1912.....	95

12 Patent to Burhorn, No. 1,092,334, Apr. 7, 1914....	96
13 Patent to Alberger, No. 1,098,004, May 26, 1914...	97
JJ Photostatic enlargement of Cut 14 in Plaintiff's catalog .....	97
KK Correspondence .....	102
LL Assignment from Braun, Feb. 10, 1923.....	102
MM Photographs .....	115
NN Blue-print .....	115
OO Sketch of louver panel .....	124
PP Specifications .....	126
QQ Model .....	133
RR Letter, Shell Co. to Alberger Pump & Condenser Co..	137
SS. Catalog Stocker Cooling Tower No. 3.....	138
TT Figure showing and definition of "spline".....	163
UU Model introduced in connection with Moser's testi- mony .....	178

[136]

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In the Southern Division of the United States Dis-  
trict Court, in and for the Northern District of  
California, Second Division.

Before Honorable JOHN S. PARTRIDGE, Judge.  
IN EQUITY—923.

COOLING TOWER COMPANY, INC., a Cor-  
poration,

Plaintiff,

vs.

C. F. BRAUN & COMPANY, a Corporation,  
Defendant.



November 27, 1923.

Counsel Appearing:

For Plaintiff: ANDREW FOULDS, Jr., Esq.  
E. A. O'BRIEN, Esq.

For Defendant: CHARLES E. TOWNSEND,  
Esquire.

Mr. FOULDS.—If your Honor please, I hand you a copy of the patent on which this suit is based. It has to do with the cooling tower art. As your Honor possibly knows, cooling towers are used in industrial plants for the purpose of reducing the temperature of water; they effect a great saving in the water used. The water is elevated or pumped to the top of the tower and then permitted to flow through a series of decks, as they are called, in fine spray, small drops, and cooled by atmospheric action. There are a number of types of cooling powers. Some use a forced draft—that is, the air is pumped up through the water as it flows, and others merely use the atmospheric action. Ours is an open type tower, a framework upon which are supported slats or bars, and the [137—1] wind blowing through the tower cools the water, so that as it is collected in the basin of the tank at the foot of the tower the temperature has been reduced. The patent has to do particularly with the form of the decks. The tower is broken from top to bottom by these open slat decks. Various methods have been used for breaking up the water in its fall. We use wooden slats or bars. At the top of the deck there is a bar running across

the deck laterally which has a trough on top. The water is distributed into these bars by small spaces; the water overflows the bars, flows to the deck below, where the bars run at right angles, it splashes on these bars and runs down between them to another deck, and so on, for four decks. Then there is another distributing deck, the trough running in the opposite direction, for the purpose of again distributing the water so that if the wind blows it to one side of the tower it is again distributed evenly over the entire tower.

We have taken depositions of some witnesses in New York, and we will have some other testimony here.

I will offer in evidence a patent in suit granted to Mitchell-Tappen Co., as assignee of B. H. Coffey, No. 1,010,020, dated November 28, 1911.

The COURT.—This is a copy of it?

Mr. FOULDS.—That is a copy of the patent. I also offer in evidence the assignment. This was offered in evidence in New York, the assignment of the patent by the Mitchell-Tappen Co. to the Cooling Tower Company, dated May 17, 1915, which was marked Plaintiff's Exhibit No. 12 in the depositions.

The COURT.—Admitted.

(The patent is marked Plaintiff's Exhibit 48.)

Mr. TOWNSEND.—If your Honor please, would you care to hear an outline of the defendant's position? It might clarify [138—2] the issue somewhat.

(Testimony of Walter Hagenbuch.)

The COURT.—I think I would rather hear it at the conclusion of the plaintiff's case.

Mr. TOWNSEND.—Very well.

### TESTIMONY OF WALTER HAGENBUCH, FOR PLAINTIFF.

WALTER HAGENBUCH, called for the plaintiff, sworn.

Mr. FOULDS.—Q. Mr. Hagenbuch, you reside where? A. In Martinez.

Q. In this state?

A. In the State of California.

Q. And you are employed by whom?

A. By the Shell Company of California.

Q. At their Martinez refinery?

A. At the Martinez refinery.

Q. How long have you been employed there?

A. Since 1914.

Q. Do you recall that a cooling tower was erected at the Shell Company Martinez refinery by C. F. Braun & Co., the defendant? A. I do.

Q. When was that? A. In 1915.

Q. I call your attention to Plaintiff's Exhibit No. 10; that is a photograph of that cooling tower, is it not? A. It is.

Q. When were these two towers erected by the defendant? A. In 1915—after July, 1915.

Q. Subsequently, did the defendant enlarge one of these towers? A. It did.

Mr. TOWNSEND.—Objected to, as no proper foundation is laid as to what the defendant did.

(Testimony of Walter Hagenbuch.)

We are willing to admit a lot of matters in regard to these towers, but this witness is not qualified, I think, to testify.

Mr. FOULDS.—I assumed that there would be no dispute about that. You admitted that you extended one of these towers.

Mr. TOWNSEND.—We did extend one of these towers, but I [139—3] do not think you can prove that fact by this witness.

Mr. FOULDS.—If there is any dispute about it—

The COURT.—I will admit it anyway.

Mr. FOULDS.—Q. When was that tower extended?

A. It must have been in the first part of 1916.

Q. That was tower No. 2? A. Tower No. 2.

Q. Then, subsequently, did the defendant rebuild these two towers?

A. They rebuilt them, yes.

Q. When was that? A. That was in 1920.

Q. Did the defendant also build a third tower for our company?

A. Yes, there was a third one built.

Q. About when? A. In 1921.

Q. Have you examined these towers, Mr. Hagenbuch?

A. Superficially I have examined them.

Q. Will you describe the towers and the decks?

Mr. TOWNSEND.—I object to the qualification of this witness to testify.

The COURT.—He can testify to what he saw here. The objection is overruled.



(Testimony of Walter Hagenbuch.)

A. I do not remember how the first towers were constructed, but the towers as constructed now are composed of ten decks; the first deck and the fifth deck from the top are running crosswise and the other ones are running lengthwise.

Mr. FOULDS.—Q. When you say they are running crosswise, you mean the slats or bars of these decks are running in that direction?

A. That is what I mean.

Q. Will you describe the slats or bars of the top deck?

A. The top deck and the fifth deck have cross bars, and they have grooves, I think they are half-round grooves, in which the water flows.

Q. Those grooves run the length of the bars?

A. The grooves [140—4] run not quite the length of the bars; they are interrupted by wooden pieces, about 1 by 2, which are nailed down, they are countersunk nearly to the bottom of the half-round groove in the cross pieces, and nailed to the same. The longitudinal bars which are located in the second, third, fourth, sixth, seventh, eighth, ninth and tenth decks have small grooves running lengthwise.

Q. How are those slats spaced?

A. They are held in place by some small metal fasteners which are bent down between them and nailed from the outside.

Q. Did you observe in many cases that these straps are loose and not nailed down. A. Yes.

Mr. TOWNSEND.—Objected to as leading.



(Testimony of Walter Hagenbuch.)

The COURT.—I will overrule the objection.

Mr. FOULDS.—Q. How are these decks supported?

A. They are supported by wooden supports.

Q. Frames running around?

A. Frames running crosswise.

Q. How is the water delivered to the top of the tower?

A. The water runs by gravity from the top of the tower.

Q. And then how does it operate, what happens to the water?

A. The water is running in longitudinal troughs, and from the longitudinal troughs it is distributed into cross-troughs; these troughs running crosswise, distribute it to small longitudinal troughs again, and from there it is distributed to the bars.

Q. And the water overflows the bars onto the cross-bars below? A. Yes.

Q. And so on to the bottom? A. Yes.

Mr. FOULDS.—That is all.

Cross-examination.

Mr. TOWNSEND.—Q. Mr. Hagenbuch, when you said that the [141—5] original towers that were erected in 1915 were reconstructed, just what did you mean?

A. I mean that the towers that were built in 1915 were torn down and new ones were erected; the old foundations were remodeled to take the new ones.

(Testimony of Walter Hagenbuch.)

Q. That is what I thought you meant by the term "reconstructed." A. Yes.

Q. Because that is not the usual way we use that word. New towers were built by Braun & Co. in 1920, after the old ones were torn down?

A. I think that is right.

Q. When you spoke about these slats having grooves in the new Braun towers in 1920, where were those grooves?

A. The grooves were on top of the slats.

Q. Forming little troughs along the top of the slats? A. Yes.

Q. There were no grooves, as far as you know, anywhere else on the slats?

A. No, not as far as I know.

The COURT.—What is the water used for?

A. The water is used for condensing oil products, distillates.

Q. For cooling purposes?

A. For cooling purposes.

Mr. TOWNSEND.—I will show you a blue-print, Mr. Hagenbuch. I will first ask you if you are used to reading blue-prints? A. I am.

Q. I will ask you if you recognize the construction shown in that blue-print as being like anything that is up there at the Shell plant, or was in that addition that Mr. Braun put on in 1916?

A. I recognize this section, the top section.

Q. Pointing to the figures at the upper left-hand corner of the print, marked A-1?

A. Yes. I have never inspected the towers as

(Testimony of Walter Hagenbuch.)

they were first erected, and I don't know whether these connections were there.

Q. Referring to the part marked "A-4."

The COURT.—You are speaking of the present tower, or the [142—6] first tower?

A. The present tower. I don't think that the present tower has these connections.

Mr. TOWNSEND.—Q. You mean the tongue at the right of A-4, and the groove at the left end?

A. They seem to be simply on the side. I don't know whether the grooves are round or angled.

The COURT.—Q. You don't know whether the grooves are round or angled?

A. I do not. I think they are round, now, but I am not positive of it.

Mr. TOWNSEND.—I will ask that this blue-print be marked Defendant's Exhibit "A" for identification.

The COURT.—You have not shown very clearly what it is. It is a blue-print of what?

Mr. TOWNSEND.—This is a blue-print of the plant construction employed by Mr. Braun in the addition of 1916. I will have it identified later.

A. I remember that now, that is a louver board.

Q. Add anything that you desire to your statement.

A. I think these are louver boards; they are the slanting boards; not the horizontal boards.

Q. Do you know what A-1 is?

A. I think A-1 is the top distributing deck.

(Testimony of Walter Hagenbuch.)

Mr. TOWNSEND.—I ask that this be marked Defendant's Exhibit "A" for identification.

(The document was marked Defendant's Exhibit "A" for identification.)

Q. Now, in referring to the metal strips that you have holding down the wooden slats of the deck in the present construction, can you describe that piece of construction a little more in detail?

A. Assuming you have a number of longitudinal wooden bars, let us assume they are spaced, for the sake of [143—7] argument,  $\frac{3}{8}$  of an inch apart; then that metal strip would run over the top of them crosswise, being bent down into the space between them, as such providing distance pieces; you might call them spacers, perhaps.

Q. Is this bent metal strip that forms the distance piece or spacer similar to what is shown here in Fig. 3 of Braun patent 1,334,515 of March 23, 1920?

A. With the exception I have not noticed this nail in Fig. 3.

Q. How are these strips ordinarily held down?

A. There is a nail on the outside, on the end.

Mr. TOWNSEND.—I will offer this patent to Braun, referred to, in evidence, in illustration of the witness' testimony, as Defendant's Exhibit "B."

The COURT.—Let it be marked.

(The document was marked Defendant's Exhibit "B.")

Mr. TOWNSEND.—Q. Do you recall the method for holding the slats down that was employed by

(Testimony of Walter Hagenbuch.)

Mr. Braun in the addition that he built to the Shell towers in 1916? A. I do not.

Q. If I mentioned the use of angle irons being laid over the slats and tongues being placed from one side of the angle down in between the spaces, would that refresh your memory?

A. I have never inspected as to the details.

Mr. TOWNSEND.—That is all.

Mr. FOULDS.—That is all.

TESTIMONY OF CARL F. BRAUN, FOR  
PLAINTIFF.

CARL F. BRAUN, called for the plaintiff, sworn.

Mr. FOULDS.—Q. Where do you reside, Mr. Braun? A. Pasadena.

Q. Did you formerly reside in San Francisco?

A. Yes.

Q. When?

A. I moved approximately August or September of [144—8] last year.

Q. Are you connected with the defendant, C. F. Braun & Co.?

A. I am president of the company.

Q. How long have you been president?

A. Since 1908 or 1909.

Q. Is that when the company was organized?

A. The company was that time another company which had been organized a short time before we bought it.

Q. You reorganized that company and called it C. F. Braun & Co.?



(Testimony of Carl F. Braun.)

A. We changed the name to Braun, Williams & Russell, and several years later changed it to C. F. Braun & Co.

Q. When did you first learn of the plaintiff's tower?

A. I believe a few months prior to the time that we sent them an inquiry for a cooling tower.

Q. How did you learn it?

A. I do not remember; possibly through friends, or possibly through advertising; I do not remember.

Q. You heard favorable reports of the plaintiff's tower?

A. I do not believe that I had any reports of the plaintiff's tower at the time that I sent an inquiry.

Q. You thought at that time it would be a desirable thing to represent them here on the coast, didn't you?     A. I thought—

Mr. TOWNSEND.—I object to that as leading.

The COURT.—But Mr. Braun is president of the defendant corporation and, to that extent at least, a hostile witness. The objection is overruled.

A. I thought that it might be desirable to represent them, but subsequent events proved otherwise.

Mr. FOULDS.—I move to strike out the latter part of the answer following, "but subsequent events."

The COURT.—I will let it stand.

Mr. FOULDS.—Q. Do you recall writing this letter to [145—9] Mitchell-Tappen & Co. on November 21, 1914, referring to Plaintiff's Exhibit 1?

(Testimony of Carl F. Braun.)

Mr. TOWNSEND.—Perhaps I can shorten the record. There has been a lot of correspondence offered by Mr. Foulds in New York in connection with the depositions there, and we will admit all of the correspondence except the one letter that Mr. Foulds claims he wrote to me, or to my firm on September 4, 1918. I have no recollection of having ever received that letter, and it is not in my file, and I do not think it ever was. I would state affirmatively that it was never received in my office. All of this other correspondence I will admit as having passed between these parties, reserving the objection of materiality or relevancy.

The COURT.—How am I going to tell whether it is material or not?

Mr. TOWNSEND.—There is no objection one way or the other. I will make the stipulation without qualification.

The COURT.—Does that stipulation meet the matter, Mr. Foulds?

Mr. FOULDS.—I think that if there is any objection going to be made they should be noted.

Mr. TOWNSEND.—I am not going to object to copies of letters, or anything of that sort. I am reliably informed that correspondence took place.

Mr. FOULDS.—Q. Do you recall writing that letter? A. Yes.

Q. And in answer to that letter did you receive Mitchell-Tappen Co. circulars, bulletins?

A. That, I believe, is a matter of record in the letter. It is difficult for me to remember whether

(Testimony of Carl F. Braun.)

I received their bulletins in answer to this letter, or in answer to other letters.

Q. You did receive them, however?

A. Yes, about that time I received them. [146—10]

Q. Bulletin No. 7 they sent you—this is Exhibit No. 3—you received bulletins of that kind, copies of that bulletin back at that time from the Mitchell-Tappen Co., the predecessor of the plaintiff?

A. I have seen this bulletin, and remember receiving similar bulletins, but as to when I received them I could not definitely specify.

Q. Do you remember receiving it about that time, before the erection of this Shell Company tower?

A. I do not remember seeing it; it is possible that I did receive it at that time; it is many years ago.

Q. I call your attention to the Mitchell-Tappen Co. letter to you of November 27, 1914, marked Exhibit No. 4, and your letter dated December 24, 1914, marked Exhibit 5. Does that refresh your recollection? A. Yes.

Q. Can you say whether you received Bulletin No. 7 about that time?

A. This letter, I believe, is a better record than my memory, and it mentions the Bulletin.

Q. You recall examining the literature of this plaintiff company? A. Yes.

Q. And do you recall writing on May 17, 1915, that you were now ready to undertake the sale of their cooling towers for this state? A. Yes.

(Testimony of Carl F. Braun.)

Q. I show you Plaintiff's Exhibit No. 18—

The COURT.—These numbers indicate the numbers given on the taking of the deposition?

Mr. FOULDS.—Yes.

A. I wrote this letter.

Q. Following that, did you undertake the sale of the plaintiff's towers on the Pacific Coast?

A. I purchased two towers from them.

Q. Will you answer my question: Did you undertake the sale of [147—11] the plaintiff's towers on the Pacific Coast?

A. I purchased two towers from them.

Q. Did you try to sell the plaintiff's towers on the Pacific Coast?

A. I purchased two towers and parts for two towers from them, and sold those parts.

Q. Did you try to sell towers generally for the plaintiff on the Pacific Coast. When I say "you," I mean your company, the defendant.

A. We did try to, and did sell the two towers in question.

Q. These towers that were sold to the Shell Company?

A. We sold to the Shell Company parts of the towers.

Q. For their plant at Martinez? A. Yes.

Q. What do you mean by selling to the Shell Company parts of towers?

A. I mean to say we contracted with the Shell Company for a cooling tower, and we purchased

(Testimony of Carl F. Braun.)

part of that tower from Mitchell-Tappen Co., and other parts elsewhere.

Q. What do you mean by purchasing other parts elsewhere?

A. I mean that we purchased lumber for the tower locally.

Q. The Cooling Tower Company gave you the drawings for that lumber, didn't they?

A. They did.

Q. And specifications? A. They did.

Q. So that it was the Cooling Tower Company's tower, except that you got the lumber and manufactured it according to the Cooling Tower specifications and on their license?

A. The Cooling Tower Company supplied the drawings; it was part of our order that they should supply the drawings.

Q. They gave you a specific license to erect that tower?

Mr. TOWNSEND.—The use of the word "license" in counsel's question is objected to as assuming a fact not in the record.

Mr. FOULDS.—I refer you to a letter of the Mitchell-Tappen Co. to you, dated April 21, 1915, Plaintiff's Exhibit [148—12] 9, and call your attention to this sentence: "The wood drip bars are patented and we allow you to use them in this case only." You recall that, do you not?

A. Yes, I remember this letter.

Q. And it was on that that you bought the wood



(Testimony of Carl F. Braun.)

for these towers which were erected on their design, was it not?

A. I bought the wood for the towers from their drawings under our orders.

Mr. TOWNSEND.—If your term “license” had reference to that letter in that way, I withdraw my objection.

Mr. FOULDS.—That is my understanding that they licensed him to use their patent.

Q. Had you ever seen drip bars having troughs running longitudinally before this Cooling Tower drip bar?

A. No, I do not recollect of having seen bars similar to these.

Q. Have you the erection drawings for this tower?

A. No, they were returned to the Mitchell-Tap-pen Company.

Q. They sent you extra copies, though, didn't they?

A. All drawings were returned to Mitchell-Tap-pen Company.

Q. I show you these prints and ask you whether you recognize these as copies of the drawings sent to you for the erection of the two towers at the Shell refinery at Martinez?

A. We received drawings at least very similar to these. I cannot remember detail drawings since 1914.

Q. Can you see anything there which appears to be different from what was sent to you at that time?

(Testimony of Carl F. Braun.)

A. Not offhand.

Q. Have you studied them?

A. It is impossible to study them in the length of time I have now.

Q. I refer you to a sheet numbered 105 and ask you whether you recall the distributing bar marked J1 at the top, the drip bar marked J3, and the louver board below that at the left-hand side of the drawing? A. Yes, I recall them. [149—13]

Q. Were those original two towers constructed with distributing bars, and drip bars, and louver boards, as shown on that drawing?

A. I believe that they were.

Q. Will you describe the position and construction of the louvers on these towers of the plaintiff which you erected at the Shell plant at Martinez?

A. A louver appeared extending outwardly from the tower at an angle, as shown on the photograph.

Q. You refer to Plaintiff's Exhibit No. 10?

A. Yes.

Q. At an angle approximately of 45 degrees?

A. Approximately.

Q. How were those louver boards supported? You may refer to the drawings shown you.

A. They were supported by brackets similar to those shown on 59.

Q. That is, the horizontal frame of the deck was extended outwardly to the top of the inclined louver board, and the lower edge of the louver board was secured near the deck below? A. No.

Q. In what respect was my statement incorrect?

(Testimony of Carl F. Braun.)

A. The entire statement is incorrect.

Q. I call your attention to three figures at the top of a sheet No. 116; what is the figure in the upper left-hand corner marked "Elevation 2-2"?

A. I do not understand you. This is a side view of the tower. Permit me to remark this is an elevation of a standard 1400-gallon cooling tower; that is the title of the drawing.

Q. What are the figures marked "Elevation 1-1," "Elevation 2-2," "3-3"?

A. Elevation of a standard 1400-gallon cooling tank.

Q. That answer does not mean anything.

Mr. TOWNSEND.—I apprehend you are asking for an explanation of what these mean?

Mr. FOULDS.—Yes.

A. I do not hardly understand what you mean. An elevation is ordinarily a side view. [150—14]

Q. Then the figure marked "Elevation 2-2" is a section taken on the line 2-2?

A. It is not a section of the tower, it is an elevation, as I understand it.

Q. But the louvers are not shown; the louvers are removed, therefore it would make a section?

A. This is a diagrammatic representation.

Q. I am trying to get an explanation so that we will understand what this blue-print means. You, of course, know, because you are accustomed to blue-prints.

A. The diagram shows where the louvers would be.

(Testimony of Carl F. Braun.)

Q. You refer to the lines on the two ends?

A. They are purely lines, and I presume these lines are where the louvers go, although I would not say exactly. These lines may mean louvers but they do not clearly show.

Q. I am referring to the part between the framework shown here and the observer.

Mr. TOWNSEND.—There is nothing here on this blue-print to show any louver between the observer and the tower.

The COURT.—What you are trying to get at is whether that is an open section.

Mr. TOWNSEND.—Counsel referred to a section on the elevation 1-1, and the figures 2-2; there is nothing there but those figures, with the arrows to indicate that that is a section.

Mr. FOULDS.—I think the witness can explain this.

A. If this is an open section, the drawings are improperly marked.

Q. Refer to the extended horizontal deck at the top of this tower in the three views marked "Elevation 2-2," "Elevation 1-1," and "Section 3-3," and state whether that does not show a horizontal deck frame extended out to the top of the louver?

Mr. TOWNSEND.—If counsel has the specifications that accompanied these blue-prints, I think it would only be fair to [151—15] submit those specifications to the witness.

A. From this drawing, particularly the plan, I conclude that the horizontal member is not extended.



(Testimony of Carl F. Braun.)

Mr. FOULDS.—Q. I refer you to section 3-3 on the upper right-hand corner, and ask whether at every deck the horizontal member is not extended to the top of the louver?     A. No.

Q. What is that line?

A. As shown by the detail drawings submitted, it is a bracket, a separate piece.

The COURT.—Where is that?

A. That is here, I believe, and is shown by the plans to be a separate piece; this is a plan drawing, it is marked "Plan"; there is no member extending here or here. I mean there is no member extending here or there. This is a walk, here.

Mr. FOULDS.—Q. Then there was a walk extending out from the top of the tower to the top edge of the louver?

A. There was a walk around the tower; I do not remember the exact location of it.

Q. Does the walk support the top of that louver?

A. Not according to the drawing.

Q. It was secured to the top of the louver, was it not? I refer you again to section 3-3, and also to the other elevation on the top of that sheet, No. 116.

A. It was secured to a vertical member, an outside member.

Q. And the top of the louver board was also secured there at that point, was it not?

A. Not at that point, but as shown by this drawing at another point.

Q. Will you explain what you mean—what detail drawing you referred to?     A. 59.



(Testimony of Carl F. Braun.)

Q. What does 59 show?

A. It shows details of a cooling tower, particularly that part of the structural steel work on the outside of the tower. [152—16]

Q. Can you show us where the detail of the steel work shown on this drawing 59 fits on to the detail shown on sheet No. 116? A. Yes.

Q. You have turned sheet 59, with its left-hand side at the bottom: Is that the way it should read?

A. I believe so; that is the way I read the drawing.

Q. Will you explain what the drawing shows as you have now positioned it?

A. The drawing shows a vertical column, a vertical member about three feet from the column, a short angle or a short member, I believe they are angles, connecting the columns and the outside members.

Q. Now, referring to the lower part of the drawing, you find two panels, do you not, one on the right and one on the left?

A. No, I do not find panels.

Q. Will you tell us whether these parts marked LP and CP respectively are a section of the supporting frame of the tower?

A. They appear to differ.

Q. Referring to this drawing, where is the tower itself positioned with reference to these uprights?

A. These are part of the tower.

Q. I refer to the body of the tower.

(Testimony of Carl F. Braun.)

A. These are part of the tower. I do not understand clearly what you want.

Q. I am trying to learn the relative positions of these parts as to the tower body or deck Section. Do they lie to the left or to the right of the view as shown?

A. They lie to the right of the view as shown.

Q. Referring to the legend, what does CP mean, being the upper or left-hand figure?

A. CP is a designating symbol on the detail of that column.

Q. Corner post? A. Yes.

Q. And referring again to the legend, what does LP refer to? [153—17]

A. Presumably, a louver post. The words are given on the drawing.

Q. Now referring to the louver posts marked LP, when this drawing is turned with its left-hand side at the bottom, we find an inclined piece at the bottom, and near the top, one marked LP-1 and the other marked LP-2. What are those?

A. They are short angle iron members upon which louver boards are to be laid.

Q. And three of them are shown on this figure, are they not? A. No, pardon me.

Q. I mean three are shown and the others are indicated? A. Three are indicated.

Q. Indicated by these letters? A. Yes.

Q. Will you describe the louver supports by referring to this drawing, sheet 59? Do you find a

(Testimony of Carl F. Braun.)

triangle with its vertical member an upright post of the tower?

A. There is not an exact triangle.

Q. Is it a three-sided member? A. Yes.

Q. Isn't a three-sided member a triangle?

A. This is four-sided, that is why I stated it was not an exact triangle. This is not a three-sided member, but a four-sided member.

Q. Will you refer to the bottom of the drawing and tell me whether that is a triangle?

A. That is a triangle.

Q. Now, the vertical side of that right-angle triangle is the vertical post of the tower, is it not?

A. It is.

Q. And the horizontal member is an extension of the deck, is it not? A. No.

Q. What is it? A. It is a separate piece.

Q. But it is extended at the deck, is it not?

A. The drawing does not show that.

Q. Refer to indicated position of the deck throughout the [154—18] height of the tower and of the louver portion throughout the height of the tower, and tell me whether there is not a horizontal member extended out from approximately the deck to the top of the louver board?

A. If I read this drawing correctly, the louver-supporting member is not extended at the deck.

Q. Referring to the lower part of the louver post shown at the lower part of this sheet 59, will you indicate on that triangular louver support with the words "Louver plates" within the tri-

(Testimony of Carl F. Braun.)

angle where the deck terminates and where the horizontal louver support joins the vertical post?

A. There is no horizontal louver support.

Q. It is approximately horizontal, is it not?

A. No.

Q. How much off the horizontal?

A. 15 degrees, approximately.

Q. You think that the horizontal support from the top of the louver to the horizontal deck is 15 degrees off the horizontal?

A. I think there is not a horizontal member.

Q. Is there not a horizontal deck member?

A. There is a horizontal deck member, but not shown on this drawing.

Q. It is indicated on the drawing, is it not?

A. I cannot find it. That is why I said, if I read the drawing correctly, I believe these—indicating the dots on the right-hand post—are where the deck comes in, but I can't find any notation on this drawing that shows that it is.

Q. Can you tell us where the horizontal deck members join the vertical post? You might refer to the lower triangle shown on the figure marked LP.

A. I am unable to find on this drawing the position at which the deck is secured to the posts, but I believe it is about three inches above the point where the louver supporting angle member is secured.

Q. The dots shown on this vertical post are intended to indicate bolt holes or bolts, are they not?

(Testimony of Carl F. Braun.)

A. Yes. The solid [155—19] dots are so marked.

Q. Then the solid dots on the vertical posts will show where the horizontal deck member is bolted to the vertical frame; is that correct?

A. Or where something else is bolted to the vertical frame.

Q. Do you recall having erected the tower of the plaintiff?

A. I did not personally erect the tower.

Q. You had supervision of it, did you not?

A. No.

Q. How frequently were you there on the field?

A. As erector, not at all.

Q. Will you read my former question, Mr. Reporter?

(The record was here read by the reporter.)

A. I do not remember.

Mr. TOWNSEND.—Might I just make a suggestion? If counsel will indicate what he wants to prove by these drawings, perhaps we can stipulate to it. If it is a question of proving what the construction of that Shell tower in 1915 was, I am quite sure we would co-operate to give the Court knowledge of what the exact construction was. It is difficult to take blue-prints, having no specifications, and attempt to build up a theory as to construction which may not accord at all with the actual facts.

Mr. FOULDS.—Might I dictate this stipulation, and perhaps you will agree to it. Please tell me if I am not right.



(Testimony of Carl F. Braun.)

Mr. TOWNSEND.—We can perhaps agree on what that construction was. I do not know anything about these blue-prints. Mr. Braun is of the opinion that these blue-prints were sent to him by the Cooling Tower Company at that time and were later returned, and your information, Mr. Foulds, is that these blue-prints are correct. We do not want to spend any time in trying to prove them. If you are trying to prove the structure that [156—20] was actually erected at Martinez, this is a round-about way of getting at it.

Mr. FOULDS.—I think I could describe the tower briefly, and will be very glad to do so to save time, if Mr. Braun will stop me if I am incorrect. I have seen a great many of the plaintiff's towers, and I presume this tower was the same as the others.

Mr. TOWNSEND.—If you want to find out about that tower, why don't you ask Mr. Braun what its construction was?

Mr. FOULDS.—I was trying to.

The WITNESS.—The transverse deck members were bolted to columns, I believe that they were bolted, according to the solid white marks on this drawing, but the solid white marks are not marked as being holes for securing the transverse deck members.

The COURT.—Haven't you some witness, Mr. Foulds, who is familiar with these blue-print?

Mr. FOULDS.—Unfortunately, our man here has been taken ill, and he is unable to be here, and I

(Testimony of Carl F. Braun.)

fear that it might be necessary for me to take the stand—of course, I do not want to—in order to explain them; I hoped that perhaps I could do it through Mr. Braun, himself.

The WITNESS.—Well, now, can I—

Mr. TOWNSEND.—I would not volunteer anything, Mr. Braun, unless the Court or counsel desires it. I may say that this Shell tower erected in 1915, I do not understand, is contended as being an infringement.

The COURT.—I do not think it is. I suppose the idea is that the details of this tower are such that your contention would be that the patent as issued to the defendant was a very similar device in some way. [157—21]

Mr. FOULDS.—The identical thing, and I want the Court to understand this.

Mr. TOWNSEND.—He is trying to anticipate the defense in this matter. I have no objection to his putting in his evidence at the proper time.

Mr. FOULDS.—I want to show what the defendant is doing now.

The COURT.—Proceed.

THE WITNESS.—I believe that part of the drawing refers to the place where the deck members are bolted on. It does not show it on the drawing, but possibly that is what is intended.

Mr. FOULDS.—Q. I refer you to the sheet marked "109," the characters IP refer to intermediate posts between the corner posts, do they not?

(Testimony of Carl F. Braun.)

A. Intermediate posts, on the drawing it is entitled.

Q. By referring to this drawing of the intermediate posts, what is the diagonal line? You have turned this drawing with the left-hand side to the bottom, have you not?

A. What diagonal line, please?

Q. The diagonal line just above the letters IP-2 on the lower right-hand corner when the drawing is turned with its left-hand side downward?

A. It is probably a member for supporting the louver, and the louver boards are laid upon that.

Q. The louvers were supported by supports running in that manner, were they not? A. Yes.

Q. What is that horizontal piece at the top, running from the top of the louver to the vertical tower?

A. That is a small member extending from the column to an outside member.

Q. And was the horizontal deck frame substantially a continuation of this horizontal louver support? A. No.

Q. It was extended in the same line, was it not?

A. This horizontal support is a walk support. You made the statement [158—22] that it was a horizontal louver support.

Q. Isn't it a member secured to the tip of the louver, or approximately so, and to the vertical column?

A. It is a member secured to the vertical column and the outside vertical member.

(Testimony of Carl F. Braun.)

Q. You find there a right-angle triangle frame for the louver, the louver being laid on the inclined line of the triangle, do you not?

A. I find a four-sided figure.

Q. Will you point out the four-sided figure?

A. The four-sided figure is  $2\frac{1}{2}$  inches long on the outside.

Q. You refer to the position between the two bolt holes where the angular and horizontal members join? A. Yes.

The COURT.—How would that be four-sided?

A. This is a side out here.

Q. On the outer part. On the inner part it would be a triangle?

A. That would be circular, and that is not a triangle.

Q. I cannot see it.

A. Suppose we move this a little farther down.

Q. Do not these two members meet at this point?

A. No. This is another member, here.

Mr. FOULDS.—Q. The towers that you erected in 1915 at the Shell refinery in Martinez had these louvers extending all around the four sides of the tower, did they not? A. Yes.

Q. At the top of this tower the water was delivered and spread over a distributing deck. Is that correct? A. Yes.

Q. That distributing deck comprised spaced bars running laterally of the tower, each bar being grooved longitudinally?

A. Longitudinally of the bar?



(Testimony of Carl F. Braun.)

Q. Yes. A. Of the bar, yes.

Q. And these troughs formed by these longitudinal grooves were dammed at the end?

A. Yes, and at intermediate points. [159—23]

Q. So that the water overflowed the sides of these distributing bars? A. Yes.

The COURT.—The water did not go beyond this point, but it was checked by that so that it went over the side? A. Yes.

Mr. FOULDS.—Q. Ran over in a thin film to the deck below. Is that correct?

A. It fell to a deck below.

Q. How far below the deck was this drip deck, approximately? A. I would say 40 inches.

Q. The drip deck below this distribution deck that you have referred to was composed of slats running at right angles to the slats of the distributing deck? A. The deck below?

Q. Yes. A. Was composed of slats.

Q. Yes, running at right angles to the slats of the distributing deck. A. Yes.

Q. And these slats were spaced apart and grooved, were they not, on their upper face? A. Yes.

Q. And they ran longitudinally of the top?

A. Yes.

Q. How many of these drip decks were there?

A. Four.

Q. There were four of these drip decks, and then another distributing deck, was there not?

A. No.

Q. Was there not another distributing deck intermediate— A. In these towers?



(Testimony of Carl F. Braun.)

Q. Yes. A. In the towers that were erected?

Q. The towers that were erected in 1915.

A. The parts for which we purchased?

Q. Yes. A. No.

Q. You did not use any distributing deck intermediate the top and bottom of the tower? A. No.

Q. Were the bars of these decks below the top deck all positioned longitudinally of the tower?

A. I believe they were.

Q. Then the only deck the bars of which ran laterally was the top deck? A. Yes. [160—24]

Q. You do not recall another deck running cross-wise?

A. I do not recall any other deck running cross-wise.

Q. At the bottom of the tower there was a tank into which the water, drip water, was collected.

Is that correct? A. Yes, that is correct.

Q. About a year later you enlarged one of these towers, didn't you? A. Yes.

Q. That was the tower No. 2, situated at the east?

A. I believe it would be approximately at the east.

Q. What enlargement did you make? How did you enlarge it?

A. We built an addition to the tower.

Q. You mean you lengthened it?

A. We lengthened it.

Q. This, then, was put on the end away from tower No. 1? A. Yes.

Q. Was the construction of this addition the same as the construction which you have already described? A. No.

(Testimony of Carl F. Braun.)

Q. In what respect did it differ?

A. It differed in the design of the main deck boards.

Q. By the main deck boards you mean what?

A. The longitudinal deck boards, the cooling decks. It differed in the manner in which these decks were spaced and secured to the supporting members. It differed in the design of the redistributing deck; it differed in the design of the transverse launders at the top of the tower; it differed in the design of the overflow distributing troughs at the top of the tower, the primary overflow distributing troughs, and it differed in some structural details.

Q. However, it formed, with the old part of the tower, a complete unit?

A. It was built to conform to the general architectural appearance of the first tower.

Q. When was that tower erected, or enlarged, rather?

A. In 1916; I believe that can be shown from records better than [161—25] from my memory.

Q. Did you ask the Cooling Tower Company for a license to do this?      A. No.

Q. You did not inform the Cooling Tower Company in any way of this work that you had done, did you?      A. Not that I remember.

Q. After you completed the two towers that you first constructed there, did you put the Cooling Tower Company's name-plate on the towers?

A. I do not remember that.

(Testimony of Carl F. Braun.)

Q. I call your attention to this letter asking that that be done. Do you recall the name-plate of the Cooling Tower Company—do you recall seeing them? A. I have seen their name-plates.

Q. Don't you recall the name-plates that were affixed to these towers?

A. I recall that they requested it, but I don't recall how or when it was done.

Q. You remember that they sent you the plates to be put on the towers, do you not?

A. I remember a letter from them asking that these plates be put on the tower.

Q. You don't remember whether you executed it? A. No, I don't remember.

Q. When you reconstructed the towers, you put your name-plate on them, didn't you?

Mr. TOWNSEND.—What do you mean by "reconstructed the towers"?

Mr. FOULDS.—Q. You rebuilt these towers, didn't you?

The COURT.—You mean the last time, or this time when he built this extension?

Mr. FOULDS.—I mean later, after that.

A. I rebuilt the towers for the Shell people at Martinez.

Q. These towers that you have described up to this time were razed and other towers constructed on that site? A. Yes. [162—26]

Q. By you? A. Yes.

Q. When were these new towers constructed on

(Testimony of Carl F. Braun.)

the site of the old towers? A. I believe in 1920.

Q. By the defendant? A. Yes.

Q. Have you a photograph of these towers? Can you point out a photograph of the new towers?

A. It is not here.

Mr. TOWNSEND.—Counsel referred to a catalog, Bulletin No. 101, of C. F. Braun & Co. Have you any objection to our offering this in evidence at this time?

Mr. FOULDS.—If you want to offer it, I have no objection.

Mr. TOWNSEND.—I ask that it be introduced in evidence.

(The document was marked Defendant's Exhibit "C.")

The COURT.—Is that your exclusive business, the manufacture of cooling towers, or have you manufactured other things, also.

A. We manufacture other things, metal products.

Mr. FOULDS.—Q. Prior to the time you started in this cooling tower business you were merely selling agents for others, were you not?

A. No, we were not agents; we were construction engineers; we bought the products and sold them. We were not agents.

Q. You were selling representatives?

A. No, we were not selling representatives.

Q. You were selling goods for others?

A. We were buying and selling.

Q. But you were not doing any manufacturing, at all?

(Testimony of Carl F. Braun.)

A. We were designing plants, buying and selling.

Q. Did you use a photograph of this Shell Company tower erected in 1915 on your circulars as your own tower?

A. No. We used them on our circulars.

Mr. FOULDS.—Have you one of those circulars, Mr. Townsend?

Mr. TOWNSEND.—We have not. If you have one we would be [163—27] very glad to have you offer it.

Mr. FOULDS.—Q. You recall that you used a reproduction of that picture on your circulars?

A. I used it, either that or a similar photograph, a photograph of these towers.

Q. Referring to Plaintiff's Exhibit 10?

A. Yes.

Q. Prior to that, you had never issued any advertising literature showing a cooling tower?

A. I do not believe that we had.

Q. Then this plaintiff's cooling tower at the Shell Company refinery at Martinez was the first cooling tower that you had ever erected?

A. No, it was not.

Q. The first cooling tower of this type, the other type being the Alberger forced-draft tower?

A. The Alberger tower was of a different type than your tower.

Q. This is the only tower of this type, the first tower of this type? A. Of that type, yes.

Q. Did you find the open type tower more satisfactory than the closed type?



(Testimony of Carl F. Braun.)

A. I believe that for most conditions the open type is more satisfactory than the closed type.

Q. Do you make any closed type tower now?

A. We do not make the closed type tower now.

The COURT.—The closed type is the forced-draft type?

A. Yes. It is usually a cylindrical affair that looks something like a chimney, about 40 feet high, and it is filled with grids over which the water trickles, air being blown into the bottom by a fan.

Mr. FOULDS.—Q. Now, referring to these old towers that you first put up at the Shell Company plant did you have a series of superimposed decks with openings or perforations through which the water fell successively? A. Yes.

Q. And the troughs of this top deck were dammed or closed so [164—28] that the water would be distributed evenly over the surface of the deck below? A. Approximately.

Q. Now, that also existed in the last tower that you built, you say, about 1920? A. Yes.

Q. Did each of the decks have a series of rather closely-spaced parallel trough members? A. Yes.

Q. Referring to the tower which you erected in 1920, there were uprights at the corners of the towers with intermediate uprights between them?

A. Yes.

Q. And there were ten or eleven horizontal decks supported by these uprights?

A. Yes—I am not certain of the number of the decks, but approximately.

(Testimony of Carl F. Braun.)

Q. At the bottom of the tower was a collection tank for the water? A. Yes.

Q. The water to be cooled was brought to the top of the tower by a flume and distributed over the top deck? A. Yes.

Q. These top decks were formed of drip bars which were grooved longitudinally? A. Yes.

The COURT.—We will be in recess until two o'clock.

(A recess was here taken until two o'clock P. M.)  
[165—29]

#### AFTERNOON SESSION.

C. F. BRAUN, direct examination (resumed).

Mr. FOULDS.—We were speaking of the towers that you erected in 1920, just before recess, and you were describing those towers at Martinez.

A. We were speaking of the towers of 1920.

Q. Yes, the last tower. The top deck of that tower was composed of bars of wood grooved longitudinally for their length and laid laterally on a supporting frame, were they? A. Yes.

Q. Those troughs were positioned by splines running across them, weren't they? A. No.

Q. Weren't there splines set in these trough bars, running across the bars?

A. No, there were no splines.

The COURT.—What are splines.

Mr. FOULDS.—Q. Weren't there pieces of wood set down in the grooves?

The COURT.—I don't know what "splines" are.

Mr. FOULDS.—Splines are spacers used to posi-

(Testimony of Carl F. Braun.)

tion the bars. In the bars that run longitudinally of the deck, these splines are made of strips of metal which are bent down to form a loop between the bars, to separate them.

The COURT.—It is only to hold them in position?

Mr. FOULDS.—Yes.

Mr. TOWNSEND.—We object to his interpreting “splines” the way he does, as strips of metal. If you refer to the patent of the plaintiff in suit you will see that the word spline is a little wooden block fitted into a groove between the slats; it has a specific definite meaning, and by no stretch of the imagination can you call these metal strips of the defendant a spline. It is only one of the unwarranted ways that they are attempting to stretch this patent far beyond [166—30] the elastic limit.

The COURT.—I had no conception of what they were.

Mr. FOULDS.—What do you understand to be a spline?

A. I understand a spline to be a loose piece of wood or other material fitting into groves.

Q. Now, I call attention to your own patent, No. 1,334,515, dated March 23, 1920, line 85 on the second page, in which you say that your distributing deck bars or trough members are held spaced apart and dammed by splines. Do you use that construction?

A. We use the construction shown on the print.

Q. And the description described in these lines?

(Testimony of Carl F. Braun.)

A. I think that that is an improper use of the word spline.

Q. You use it in your own patent, don't you?

A. Apparently so.

Q. And your drip bars or trough members are held apart and spaced by something that was called a spline in that patent?

Mr. TOWNSEND.—That is not a fair statement of what the patent shows.

Mr. FOULDS.—It is his own patent, and he ought to know. Can you answer that question?

A. The troughs are held apart.

Q. Will you answer that question "Yes" or "No."? A. No.

Q. Then how do you explain the statement in your patent that these troughs or bars are held apart or spaced by splines?

Mr. TOWNSEND.—If your Honor please, that is not a correct statement of what the patent says. It says that these channels are dammed by splines 28 or an element which is called a spline. Damming the channel and spacing the bars is a very different thing.

The COURT.—I think it is proper to ask him what that means.

Mr. TOWNSEND.—Yes, I have no objection to that, but I object to the interpretation he puts upon it.

The COURT.—He has pointed out the distinction, anyway. [167—31] Personally, I cannot see that

(Testimony of Carl F. Braun.)

it makes the slightest difference whether they were, or not.

Mr. FOULDS.—I submit your Honor is correct. That is our contention.

Q. I notice you say “dammed” there. Do they serve the purpose of damming the water, besides their function of holding the drip bars apart?

A. Actually, it is a long piece of wood with a nail into each board. How they happened to be called splines I don't know.

Q. Do they dam the water?

A. It is a long board.

Q. That is, the little piece, I mean.

A. Yes, they dam the water.

Q. I call your attention to the cut taken from your catalog, Defendant's Exhibit “C.”

A. This is correct, but counsel possibly has a model there.

Q. I am conducting the examination now. I call your attention to a cut of your tower, dated August 15, 1920. The upper view shows the top deck with the distributing troughs, does it not? A. Yes.

Q. Will you indicate the splines which you say in your patent space apart and dam the troughs?

A. They are not splines, but they are referred to by number, and this is the piece here.

Q. Will you draw a line to it and mark it with the letter “A”?

A. Yes.

The COURT.—Is that that strip running through there? A. Yes.



(Testimony of Carl F. Braun.)

Mr. FOULDS.—Q. Are there also end splines?

A. Yes—not end splines, but an end piece.

Q. That is what you call in your patent a spline, is it not? A. Yes.

Mr. TOWNSEND.—Figure 13 shows a spline.  
[168—32]

Mr. FOULDS.—The end splines are on the ends of here, are they not?

A. It is not shown on the drawing that way. There is a piece across the end, as indicated by my mark A.

Q. Referring to the lower figure on this cut of your tower dated August 15, 1920, that shows the intermediate or lower deck, does it not? A. Yes.

Q. And those longitudinal drip bars are held apart and spaced by what you call a crimped ribbon? A. Yes.

Q. Will you indicate that by the letter B?

A. Yes.

Q. Those lines crossing the deck are all of that construction, are they not? A. Yes.

Mr. FOULDS.—I offer in evidence the cut referred to by the witness.

The COURT.—Let it be admitted.

(The cut was marked Plaintiff's Exhibit 49.)

Mr. TOWNSEND.—Mr. Foulds, I understand the cut that you just introduced, the sheet with the two cuts as Exhibit 49, is a reproduction of the Fig. 15 on page 27 of Bulletin No. 101, and Fig. 17 on page 28, Exhibit "C."

Mr. FOULDS.—That is correct. The cut

(Testimony of Carl F. Braun.)

marked "Fig. 15" on page 27 is the top view, and the cut marked "Fig. 17" is the lower view.

Q. What is the object of these crimped ribbons?

A. To hold the deck down.

Q. And to permit longitudinal expansion without buckling of the boards? A. Yes.

Q. In the wetting and drying of these decks the slats or boards are apt to buckle? A. Yes.

Q. And this would cause them to approach so closely together that the water would not flow evenly over the side: Isn't that true?

A. No; they probably warp in the other direction; they probably warp up and down. [169—33]

Q. But the object of your crimped ribbon is to keep them evenly spaced and in an even position both up and down and sideways?

A. To secure them to the transverse members.

Q. I call your attention to your patent.

A. (Continuing.) And also it does space them.

Q. The last five lines on the first page of your patent No. 1,334,515:

"Furthermore, some woods have longitudinal expansion, which may be accommodated as the slats are not fixed rigidly to their supports, thus preventing buckling." That was your object in using these spacing ribbons?

A. That is one of the advantages of the ribbons.

Q. Was that also the object and advantage of the spacers used by the plaintiff in your first tower?

A. In the first tower at Martinez, you mean?

Q. Yes.

(Testimony of Carl F. Braun.)

A. No, I do not think that their construction permitted of longitudinal expansion.

Q. Wouldn't the slats slide longitudinally on their spacers?

A. They would, if there were any means of holding the deck down, if the deck were fastened down.

Q. The spacers used by the plaintiff permitted the slats to expand longitudinally, and also up and down, didn't they?

A. No; the spacers didn't hold the deck down.

Q. The spacers permitted them to expand longitudinally, to slide?

A. It didn't hold the deck down.

Q. Isn't that correct, that the spacers used by the plaintiff permitted the boards to expand longitudinally?

A. The decks could not expand longitudinally, because they were secured down by another device than the spline.

Q. But the spacer used by the plaintiff and shown in the drawing [170—34] referred to this morning—

A. (Intg.) They would not interfere with the longitudinal expansion of the deck boards if they were otherwise free to expand.

The COURT.—Is there much longitudinal expansion?

A. There is considerable expansion, the boards have a tendency to warp.

Mr. FOULDS.—Q. Had you ever seen any spacer

(Testimony of Carl F. Braun.)

device between the slats prior to the plaintiff's device? A. Not that I remember.

Q. Had you ever seen any louvers such as those used by plaintiff before you saw the plaintiff's device? A. Yes.

Q. Where?

A. I saw many in New York City, Brooklyn.

Q. Were they large louvers such as shown by the plaintiff? A. Yes.

Q. The appearance of plaintiff's tower, you don't think it had a characteristic and distinctive appearance? A. Yes.

Q. Where had you seen another tower like that with that characteristic appearance?

A. In New York City, and I think at Brooklyn.

Q. At what place?

A. I do not remember. I saw several towers.

Q. Do you know whether it was a plaintiff's tower? A. Yes.

Q. It was a plaintiff's tower?

A. No, it was not.

Q. Do you know whose it was?

A. As I remember, I saw towers built by Burhorn, and I am quite certain that I saw towers built by Hart, of quite similar construction.

Q. Don't you know, as a matter of fact, that Burhorn never built a wooden tower?

A. No, I don't know that.

Q. Did you ever see a wooden tower made by Burhorn? A. Not that I remember.

(Testimony of Carl F. Braun.)

Q. Have you ever seen a wooden tower made by Hart prior to 1915?

A. I think most of the towers that I saw in the East were steel. [171—35]

Q. You never saw any wooden louvers on a tower before 1915?

Mr. TOWNSEND.—Are you drawing a distinction between a wooden louver and a wooden tower? I understand there is quite a distinction.

Mr. FOULDS.—I am examining the witness.

A. I have understood you in saying a wooden tower to mean a tower constructed substantially of wood. Up to the time that we built this type of tower, the large louver type of tower, built substantially of wood, I had not seen any towers built by any concerns of this type, built substantially of wood.

Q. The plaintiff's tower was the first one?

A. The plaintiff's tower was not built substantially of wood. It was substantially a steel structure.

Q. But the louvers in the plaintiff's tower were of wood, were they not?

A. The louvers of the plaintiff's tower were wood.

Q. Had you seen any large louver wooden towers anywhere else before?

A. Not that I remember.

Mr. FOULDS.—That is all.

Cross-examination.

Mr. TOWNSEND.—Q. Is there a model pres-



(Testimony of Carl F. Braun.)

ent in court that would represent your present construction, or the construction such as you erected for the Shell Company in 1920?

A. Substantially as that model.

Mr. TOWNSEND.—In order to properly identify the model, I will ask that it be received in evidence and marked Defendant's Exhibit "D."

Mr. FOULDS.—I object on the ground that the witness says that his distributing decks were splined, and these decks are made of strips running across the top of the deck.

The COURT.—Does the question of what you call splines make any particular difference? [172—36]

Mr. FOULDS.—I think the splines are important, and these distributing decks are clearly constructed by merely laying slats across the deck.

Mr. TOWNSEND.—We will explain that.

The COURT.—If that condition exists, and it becomes material at all, it will do no harm to have the model in. I will let it in.

Mr. TOWNSEND.—The terminology, of course, is not half as material as the function that is performed by a certain element. Now, the function, we will claim and show, performed by our construction, is entirely different than the function and mode of operation and purpose of the plaintiff's patent. I want to have that clear.

Q. Mr. Braun, will you be good enough to briefly describe the model, Exhibit "D," just referred to?

(Testimony of Carl F. Braun.)

The COURT.—Are you going to have the man that made it describe it?

Mr. TOWNSEND.—I think Mr. Braun can describe it.

The COURT.—I can readily see that general descriptions are not going to help me much, because it is evident that the general features of the construction are similar; we will have to go down to the question of detail. It seems to me we had better have that described by the man who can describe it minutely and in detail.

Mr. TOWNSEND.—I will ask Mr. Braun a question:

Q. Mr. Braun, what is your acquaintance with this model? A. I am familiar with this model.

Q. Did you have anything to do with its making?

A. Yes, I instructed that it be made, and I gave instructions regarding it, and I saw it during its construction frequently.

Mr. TOWNSEND.—I think if the Court will step down here a [173—37] minute to the model and we have a brief description, it will show somewhat the operation of it.

Mr. FOULDS.—I object on the ground it is not proper cross-examination.

Mr. TOWNSEND.—Q. Will you describe the model, Mr. Braun, and state at the same time how this compares with the Shell 1920 tower you erected, and other towers erected by you and your company?

A. The cooling of the water in the cooling tower

(Testimony of Carl F. Braun.)

is accomplished by bringing about intimate contact between the water and air. In this type of tower the water is distributed by some means at the top and flows successively from deck to deck to the basin underneath, the wind carrying the air across the tower, causing contact between the air and the water, the water emerging at the bottom cooled.

Q. The real purpose is to expose as large a surface of the water as possible?

A. Yes. The center part of the tower, as bounded by the columns, roughly, has to do with exposing this water to the air; the wind, in blowing it sometimes has a considerable tendency to carry particles of water away, and these louvers on the sides of the tower are inserted to intercept the particles of water that are being blown by the wind away from the tower and to return them to the tower.

Q. Might I mark the column you refer to A and the louvers B.

A. (Continuing.) As the direction from which the wind may blow cannot be controlled, these louvers are installed around the entire periphery or the exterior of the tower. In this model the louvers on one side, and on one end, have been omitted, so that the interior is accessible for view and discussion. Only portions of each deck are installed also, partly to save labor and partly so that we could see the construction of the tower. [174—38] The operation of the tower is that water is distributed into a flume.

(Testimony of Carl F. Braun.)

Mr. TOWNSEND.—Marked C.

A. (Continuing.) Water is delivered by a pipe or other conduit into this flume at the top of the tower; at intervals along the tower are other flumes, D, smaller flumes, into which the water from the main flume is distributed, this flume carrying the water across the tower, and from this flume the water is distributed into, in this particular case, four overflow troughs, from which the water overflows and drops onto troughs that run transversely of the tower from which the water again overflows and drops onto this longitudinal cooling deck, which really extends from end to end of the tower.

Q. The overflow is from D, representing the brass troughs: Is that correct? A. Yes.

Q. Then the overflow from the brass troughs is onto the upper deck, which we will mark E, distributing deck E? A. Yes.

Q. And from the distributing deck E it drops onto the lower decks which we will indicate generally by F: Is that correct?

A. Yes. As the water drops from deck to deck and runs over the deck boards and down between them and around and off of them, the wind is blowing, generally from one direction, and the tower is usually set across the direction of the prevailing wind, so that the wind will blow across the tower; if the wind is blowing rather briskly across the tower, the water, as it drops from deck to deck, will be briskly blown toward the lee side of the



(Testimony of Carl F. Braun.)

tower, so that finally, near the bottom, the water will be going down, largely down the lee side of the deck, while the windward side of the deck is dry. To overcome that difficulty, we install a redistributing deck, which consists of troughs, G; these extend [175—39] transversely of the tower, dammed at each end; these troughs serve to carry the excess water across, some of the excess water going down the lee side of the tower back to the windward side of the tower, and to start the water again in the condition of fairly uniform distribution over the tower.

Q. What happens from G?

A. The water then drops from deck to deck, down through the remaining cooling decks, and finally into the receiving basin or bond at the bottom of the tower. This redistributing deck is constructed in a manner similar to that in which the 1920 tower at the Shell Company was constructed, but not to the detail shown in my patent which was just under discussion.

Mr. TOWNSEND.—Exhibit “B.”

The COURT.—This is a model, then, of the tower that you are now building, and the one that you built at the Shell Company in 1920?

A. Yes, there has been very little change. The method of holding this deck down can be seen very clearly. The deck F has a brass ribbon, a continuous brass ribbon, usually supplied in one piece the entire width of the tower, pressed down at intervals to provide spacing for the decks, and to per-



(Testimony of Carl F. Braun.)

mit of fastening to the transverse members; a nail, lag, screw, or some similar device is driven through this brass strip in each of these spaces. There is a large-sized model of it.

Mr. TOWNSEND.—The witness refers to a little model which I will ask to be marked Defendant's Exhibit "E."

(The model was marked Defendant's Exhibit "E.")

A. Boards of this size split readily, and one of the objects of this strip is to prevent nailing through this rather light board; the nails go into the scantling which extends across the tower.

The COURT.—Is that about the size that you use in this tower?

A. That is about the size; in fact, I think it is [176—40] exactly.

Mr. TOWNSEND.—Exhibit "E"? A. Yes.

Q. You mean it shows the deck slats which are marked F?

A. This distance is much greater—

The COURT.—I know, but I mean to say the width and groove is about the same?

A. Just about.

Mr. TOWNSEND.—Q. How about the metal strip H of this model Exhibit "E"? Those represent life-sized construction?

A. Yes, approximately. I think they are exactly the life-sized construction. Returning to the distributing deck, you will note that this is a continuous board—you will note that the member I

(Testimony of Carl F. Braun.)

mark I is a continuous board extending across a large number of the troughs, and permanently secured to each trough by a nail; that there are no loose members here. You will also note that this metal strip H is a continuous strip usually extending across the entire width of the tower, and securely fastened by means of nails to the transverse deck-supporting member.

The COURT.—What represents No. 28 on your drawing in your patent, referred to as a spline?

A. This member, this member, and this member.

Q. What is marked I there?

A. I have explained that this model is a detail, a larger detail of this.

Q. I understand that, but this piece that dams off the trough is what is referred to as a spline?

A. That is the piece that is referred to as the spline.

Mr. TOWNSEND.—And is No. 28 in the patent?

A. Yes.

The COURT.—Where does that name come from? Is that a common name?

A. A spline is a very common name for a loose piece of wood used to join together two boards, such as, for instance, floor boards. You are doubtless familiar with the ordinary [177—41] tongue-and-groove construction in which floors are usually made, one member having a groove and the other having a tongue, and this being the tongue member and this the groove, the common use for the spline is where it is desired to join together two

(Testimony of Carl F. Braun.)

tongued members; then a loose piece is put in there like that (illustrating).

Mr. TOWNSEND.—You might explain it as a matter of record from the Coffey patent in suit, No. 1,010,020.

A. The Coffey patent shows that construction, the loose spline; Fig. 4, No. 7, shows such a loose spline—Fig. 7 and Fig. 8.

Mr. TOWNSEND.—Now, the model that the witness has referred to as representing a detail of the upper distributing deck is offered as Exhibit “F.”

(The model was marked Defendant’s Exhibit “F.”)

Q. Explain the continuation of the strips I and how they are set in there.

A. The boards marked I and 28 on Exhibit “F” are a larger detail of the part of the board marked I of the larger model D, and the construction is similar. The troughs are dapped and the board I is laid in this dap and securely nailed to each of the troughs whereby the troughs are held spaced apart and the grooves dammed.

Q. Does the nailing of the members I to the member E permit of any longitudinal movement of the members E?

A. Longitudinal of the tower?

Q. Relative longitudinal movement. Can one member E move with respect to the other member

(Testimony of Carl F. Braun.)

E if they are nailed down to the cross-member I?

A. No.

Q. Is there any provision for longitudinal expansion in this distributing deck?

A. No; the whole deck will expand, but one member cannot expand more than another member.

[178—42]

Q. I understand that these members I are simply plain boards which are rectangular in cross-section, cut into daps or grooves cut crosswise of the trough members E: Is that correct?

A. Yes.

Q. Will you just continue your description? You have not covered how the decks are supported on the cross-joists.

A. These cooling decks are supported by transverse members J, which also extend beyond the column A and receive the upper end of the louver panel.

Q. We might mark these extensions of J by the letter J-1.

A. The louvers are made in panels which are fabricated in the factory, drilled, and shipped out as fabricated members in this shape which are hoisted up and bolted. These panels also serve as structural members tying the entire structure together, and form a truss with the other members.

Q. You have longitudinal extending members to support the transverse members J, apparently; will you describe those?



(Testimony of Carl F. Braun.)

A. Which do you mean—these?

Q. Yes, which we will mark K.

A. Longitudinal members K tie the tower together longitudinally and carry intermediate deck-supporting members L.

Q. That is, the alternate deck-supporting members only extend out to here?

A. Yes, it is not necessary to extend them. These longitudinal members also extend beyond the end of the towers to receive the louvers in a manner similar to the way the transverse deck-supporting members extend to the louvers.

Q. These extensions we will mark K-1.

A. I will draw attention to the fact that the longitudinal member securing the redistributing deck trough at the center is not a dam, but is merely a piece of board nailed onto the top of the trough.

Q. That is so that the water can come back freely from the lee side?

A. Yes. This strip M serves the purpose merely of [179—43] holding it down, and this serves the double purpose of holding it down and damming it.

Q. In actual practice, what sort of metal-fastening devices do you employ, and why?

A. We employ brass, because of its long life. From experience, we found that steel will deteriorate very rapidly, and in many cases will cause the failure of the tower within a few years.



(Testimony of Carl F. Braun.)

Q. Have you any steel in this tower as you actually construct it?

A. No; in the tower that we actually construct, all material is similar to this model.

The COURT.—That is, your uprights, and all, are wood?

A. They are redwood, and these parts are brass; these bolts are brass; the deck ribbons are brass and copper; the tie rods are brass, as shown.

Mr. TOWNSEND.—Q. Will you explain a little more how the extensions J-1' and K-1 in co-operation with the louvers act as a support and strengthening members for your tower?

A. There are two types of loads in a cooling tower; one is the weight of the structure and of the water in the structure, and the other is the wind load, the load that tends to blow it over. One of the objects of extending these transverse members is to use the louvers as structural members, stiffening the entire tower and making the structure rigid as a whole. These louvers are bolted in between these transverse members J-1 and stiffen the tower from wind loads transversely by reason of the truss which is formed, and also stiffening the tower longitudinally by reason of the truss formed in this direction; that is, any tendency for the tower to move this way would be resisted by this portion in here.

Q. What height do these towers assume at times?

A. 30 to 35 [180—44] feet is about an accepted standard for cooling towers, and that height

(Testimony of Carl F. Braun.)

seems to have been used almost universally in fan towers, as well as atmospheric towers; it seems to be about the limit that people are willing to pump water. It costs money to pump water.

Q. What length have you had these towers constructed?

A. 300 or 400 feet as a maximum; from 10 or 12 feet to 300 or 400 feet.

Q. You have had single towers as much as 300 or 400 feet in length?

A. I think 380 feet was the exact dimensions of the longest single tower that we built. That, by the way, is shown in our catalog.

Q. What wind velocities do these towers have to withstand at times?

A. The resistance is usually expressed in pounds. It is usually expressed as 30 pounds per square inch; that is most structures are designed for a wind pressure of 30 pounds per square inch.

Q. Do you know what velocity the wind has attained where you have towers up, speaking in terms of miles per hour? Can you express it in that way?

A. I know that our towers have been exposed to severe gales; I know of one tower that was exposed to a very severe gale at Martinez, a gale that did a great deal of damage to shipping. I do not remember the velocity of the wind, but it was very high.

Q. And it successfully withstood that gale?

A. It successfully withstood that gale. Other towers have been exposed to very severe gales in the Taft district. There is nothing to break the wind in

(Testimony of Carl F. Braun.)

these valley places, and when it does blow, it blows very hard.

The COURT.—Where do you fabricate these members?

A. We now fabricate these at Alhambra. Alhambra is a small town lying [181—45] right between Los Angeles and Pasadena. We have a large shop there in which we fabricate even these parts; they are all drilled and these panels are fabricated, all ready to be assembled. One of the features of our tower is the fact that our field labor is reduced to a minimum; field labor is labor which cannot be controlled; it is liable to be very expensive, and also liable to result in very poor workmanship, so all of this work is done in the shop.

Mr. TOWNSEND.—Q. Prior to your building a tower of this construction, with the extension J-1 and K-1 that you mentioned, and the tying together of the tower by your louvers, had such a tower, to your knowledge, ever been constructed?

A. No. In the towers that I have been familiar with, the louver construction does not serve any structural function.

Q. Where no structural function is performed by the louvers, what do you depend upon to support the tower from collapse?

A. You must use a large number of internal braces of some kind or guy the tower by means of external guy rods in a manner similar to what you would guy a smokestack. The essential difference between this tower and the tower first built at Mar-

(Testimony of Carl F. Braun.)

tinez is that with this tower the deck supports and louver supports are one, and the louvers are tied firmly into these deck supports, so that the whole forms a very rigid structure, thoroughly tied together, and all members acting in harmony. In the other tower the deck supports—

Q. (Intg.) What other tower?

A. In the first tower built at Martinez, the deck supports are not related in any way, structurally, to the louvers; they are bolted, as shown on the drawing, by one bolt, so that they apparently serve no structural function other than to just hold the decks up, support [182—46] the deck portion.

Q. In these large-sized towers, what volume of water have you handled?

A. The largest installation that we have made is in Los Angeles; they have pumped over that tower, I believe, as high as 100,000 gallons per day.

The COURT.—In operation of condensation, for instance, of distillates, do they handle the water over again?

A. Yes, and that condensation in steam plants, where they are generating electricity, if a supply of cheap water, such as sea water, is not available, they condense their steam in the condenser by means of water which is circulated over and over again in the cooling tower. They do that in practically all ice plants. There is one out here at the National Ice Company.

Mr. TOWNSEND.—Q. Now, are you able to describe the first Shell tower that you put up in 1915,



(Testimony of Carl F. Braun.)

which tower we understand you purchased from Mitchell-Tappen Co. and erected, as heretofore indicated, at Martinez; describe it, and then compare it with the addition that you put on in 1916, and further compare it, if you will, with your present day construction.

A. The first two towers built at Martinez were substantially as shown on the drawings. These towers had steel main columns, from which the louvers were supported by small steel members. The decks were supported by transverse wooden members bolted at each end to the column. There was no connection structurally between the decks or the deck supports and the louvers or louver supports. The overflow troughs were of a tapered type; shown in one of the Coffey patents. The distributing deck was spaced by loose splines; the longitudinal decks were spaced by loose splines and secured to the transverse members by lag screws or nails. There was no redistributing deck in the tower. [183—47] That is briefly a description of that tower.

Q. Can you refer to a model which will illustrate the original 1915 Shell construction?

A. That is substantially the construction.

Q. Referring to the model which I will ask to be marked Defendant's Exhibit "G"? A. Yes.

(The model was marked Defendant's Exhibit "G.")

Q. Now, Mr. Braun—



(Testimony of Carl F. Braun.)

Mr. FOULDS.—I understand this model is illustrative and not supposed to be an exact copy?

Mr. TOWNSEND.—It is illustrative of the construction.

The WITNESS.—I would like to introduce one model to explain the construction of the deck.

Q. Will you take up the model which you want to explain?

A. Exhibit "H" is constructed in accordance with—

Mr. TOWNSEND.—The witness is referring to a model which I will ask to be marked Exhibit "H." There is another model which will be referred to in a minute, and it might as well be marked Exhibit "I," and there will be an enlargement of the Coffey drawings, which I will ask to be marked Exhibit "J."

(The models were marked, respectively, Exhibits "H" and "I," and the enlargement Exhibit "J.")

A. This is a model of the spline deck; the model is made from the patent drawings; it is not the exact construction that we now use.

Q. That is the construction which you had up there at Martinez for the Shell Company?

A. That is nearly the construction, but Exhibit "I" is the construction; but this will explain it more clearly.

Mr. FOULDS.—Is this the model of any particular thing, Exhibit "H"? [184—48]

Mr. TOWNSEND.—It is a model of the drawings

(Testimony of Carl F. Braun.)

of the Coffey patent in suit, a combination of Figs. 4, 5 and 6.

Mr. FOULDS.—Is this supposed to have been seen anywhere?

Mr. TOWNSEND.—Seen in the patent drawings.

Mr. FOULDS.—It is not a model of anything that exists. I am merely trying to make it clear on the record.

A. Not that I know.

Mr. TOWNSEND.—Made after the patent drawings?

A. Made exactly after the patent drawings.

Mr. FOULDS.—Q. As you understand them?

A. As I read the drawings. These are deck boards grooved, or the deck member, on each side, and secured at each end; and intermediate between the ends are loose splines which space these boards—spline 7 spaces the boards. The object of these splines appears to be to space the boards intermediate the place where they are fastened. These boards are fastened securely at each end to a solid member, and no provision is made for the independent expansion of any one of these boards. These splines serve solely as spacers, as this board cannot expand more than this board without moving this board. These grooves on the bottom are shown on the patent and were used on the first Martinez tower.

This is more nearly a correct model of the construction used at Martinez, Exhibit "I." The deck supports actually were approximately 3 feet apart

(Testimony of Carl F. Braun.)

instead of one foot, as shown. These boards are grooved. The boards 6 are grooved on both sides, and have splines 7; the boards are fastened down to the transverse deck-supporting members by nailing. There is no provision, therefore, for independent longitudinal expansion of these boards. The splines serve solely as spacers, providing for no longitudinal [185—49] expansion, and did not secure the board to the transverse member.

Mr. TOWNSEND.—Q. You have not described the actual tower construction. You have only described the deck construction.

A. I have described vertical posts, and louvers, and the small brackets.

Q. Describe the louvers.

A. The louvers are made of continuous boards.

Q. You have not made any reference that I can recall to Exhibit "G."

A. Exhibit "G" represents diagrammatically the structural features of the tower.

Q. Now, in this Model G, the vertical marked 1, how would you term this? A. Posts.

Q. Which posts support what?

A. Support the horizontal deck-supporting members 9 secured in the Martinez towers by one bolt at each end.

Q. What are these members 11 that are external and outside of the parts 1?

A. They are vertical members tying the louver brackets in a vertical plane together.

Q. In any of these blue-prints here that have been

(Testimony of Carl F. Braun.)

referred to by counsel for plaintiff, do you find the vertical column I shown, and the vertical louver support 11?

A. The vertical column I is shown.

Mr. FOULDS.—Referring to drawing 59, will you have him put a letter on there?

Mr. TOWNSEND.—Q. Will you mark that drawing No. 59 and the columns by the reference No. I with a circle around them?

Mr. FOULDS.—Mark it with the same letter that he has on the illustrative model.

Mr. TOWNSEND.—You have indicated in yellow pencil the vertical column 1? A. Yes. [186—50]

Q. Does this drawing No. 59 show vertical louver supports 11; if so kindly mark them. A. Yes.

Q. What would be the relative position of a louver in that same view? Mark that number 12, if you will, corresponding with Model G.

A. It is marked right here.

Q. Now, what contribution to the strength of the tower, if any, did the louvers and their supports in the 1915 tower bear to the rest of the structure?

A. None.

Q. For what reason?

A. They are not connected; the transverse members supporting the deck and tying the columns together are not connected to any of the louver members.

Q. And that relationship is explained, I believe, already, in connection with your own model Exhibit "D"? A. Yes.

(Testimony of Carl F. Braun.)

Q. Do you find a counterpart in the blue-print No. 59 of brace member 14 of Exhibit "G"?

A. Yes.

Q. Will you kindly mark that?      A. Yes.

Q. Now, this drawing No. 59, which has been turned 90 degrees, in order to illustrate what you have said, I will ask you, if you will, to kindly mark where the bottom and the top are by those words in block letters?      A. Yes.

Mr. TOWNSEND.—It is clear to your Honor, the difference between this 1915 machine and the 1920 machine, represented by Exhibit "D."

The COURT.—I think that is apparent.

Mr. TOWNSEND.—Q. In regard to this addition of 1916, what features, if any, employed in the original 1915 tower did you use? I don't know whether that has been made clear as to your deck construction, or not.

A. We made the tower conform architecturally to the other tower, but we did not use the spline deck construction. My testimony is quite complete [187—51] on that. Do you wish any more?

Q. Yes, cover it again, if you want to, and whether it bears any relation to the exhibit Model E.

The COURT.—I understand that. Was the construction used in Exhibit "E" used in the addition to the 1915 tower?

A. The construction used in Exhibit "E" was a construction that has not been shown. Pardon me,



(Testimony of Carl F. Braun.)

the construction used in the addition has not been shown.

Mr. TOWNSEND.—Q. Will you describe that construction?

A. The decks were held down--an angle-iron was punched at intervals so that a part of the wall of the angle would extend down from the angle, remaining part of the angle, would project from it possibly half an inch. That angle was laid on top of the deck board and secured by nails or lag screws to the transverse deck-supporting members. The punched-down portion of the angle served as spacers for the deck. Is that clear?

Q. Yes, it is perfectly clear.

A. This angle was a continuous piece, extending from one side of the tower to the other, and was fastened securely at intervals across the top.

Q. I show you a pencil sketch and ask you if that illustrates the angle-iron construction you have just described? A. Yes.

Q. Just tell us what the figures represent, and what the reference letters A, B, and C represent.

A. Fig. 4 shows the angle with the pressed-down lip B, and end view of the angle; Fig. 1 also shows the pressed-down lip B; the boards C placed between the pressed-down lips of the angle are shown on Fig. 2.

Mr. TOWNSEND.—This sketch is offered in evidence as Defendant's Exhibit "K."

(The sketch was marked Defendant's Exhibit "K.") [188—52]

(Testimony of Carl F. Braun.)

Q. Now, I do not understand, Mr. Braun, that in this 1916 addition you used the complete structure that you use now, and represented by Exhibit "D," where you had the joist extensions and the louver supports.

A. No, I did not. We made the tower conform architecturally to the existing tower.

Q. Before undertaking the addition to the Shell tower in 1916, did you seek a legal opinion as to the scope of the plaintiff's patent? A. I did.

Mr. FOULDS.—I object to that as immaterial.

Mr. TOWNSEND.—Q. Did you act on the advice given? A. I did.

Mr. FOULDS.—I suppose it may be assumed that that advice, your Honor, was that the claim of the Coffey patent were construed and that there was no infringement.

The COURT.—I would naturally assume so.

Mr. TOWNSEND.—I want to show that this company proceeded in good faith in what they did.

A. I was informed that—

Mr. FOULDS.—I object to that, if your Honor please.

The COURT.—What difference does it make what he was informed?

Mr. TOWNSEND.—They have attempted to show wilful infringement and purloining of plaintiff's patent, and while, of course, were infringement shown, it would not excuse the defendant, it would show he proceeded in good faith.

The COURT.—If you infringe you infringe.

(Testimony of Carl F. Braun.)

Mr. TOWNSEND.—I will not press the matter.

Q. What line of machinery and implements other than cooling towers, themselves, has your company made and sold?

A. We manufacture fluid heaters, coolers, heat exchangers, [189—53] condensers, and a number of mechanical specialties, such as by-pass valves, strainers, filters, and expansion joints.

Q. I will ask you to produce your catalog of products, if you will.

A. This is the catalog of our products.

Mr. TOWNSEND.—I will call particular attention to the disclosures in here between pages 95 and 129, particularly relating to cooling towers, and ask that this catalog which is termed "General Catalog of C. F. Braun & Co., Copyrighted 1923," be received in evidence as Defendant's Exhibit "L."

The COURT.—Is there anything to show the date of its publication?

Mr. TOWNSEND.—It is copyrighted in 1923.

The COURT.—Published this year?

Mr. TOWNSEND.—I assume that is so.

The WITNESS.—This was published in the last 60 days.

Mr. FOULDS.—I submit it cannot be material, if published in the last 60 days.

The COURT.—It will not do any harm.

(The document was marked Defendant's Exhibit "L.")

Mr. TOWNSEND.—Before we get off this Shell Company 1915 construction, I meant to ask you a

(Testimony of Carl F. Braun.)

question in regard to Cooling Tower Company's catalog, Plaintiff's Exhibit No. 21, and calling attention to Cut No. 14 of Section A, page 1, is there anything in there that corresponds to the Shell construction at that time and to the Model G, and the blue-print to which reference has been made?

A. This structure looks quite similar to the Shell structure; the scale is small; it is rather difficult to identify. I see no members which we talked about to-day as forming an angle of about 15 degrees to the horizontal. [190—54]

Q. Do you see members corresponding to members No. 1 of Exhibit "G"? A. I do.

Q. Will you be good enough to mark that on this Cut No. 14 in this catalog? A. No. 1?

Q. Yes. A. Yes.

Q. Do you see in this Cut No. 14 members corresponding to the louver support 11 in this model?

A. Yes.

Q. Kindly mark that. A. Yes.

Q. Would that louver construction have any effect at all in stiffening that structure against the wind?

A. No; it adds no stability to the structure.

Q. Will you indicate on this Cut No. 14 the position of the louvers which are marked "12" on the model G?

A. There are none on here.

Q. What are these diagonal lines connecting 1 and 11? A. They correspond to 13.

Q. Of the model? A. Yes.



(Testimony of Carl F. Braun.)

Q. The louvers, however, would rest on 13; as I understand, the louvers would be supported on 13?

A. Yes, I would like to answer just a little more on that question of strengthening the structure. If a wind blows against this and tends to cause this column to come over and this angle to open up, these do not in any way retard that.

Q. How about the louvers here?

A. They are only on the ends, and these towers are very long. Also, these are not securely fastened to these members.

Q. The louvers 12? A. The louvers 12.

Q. To the vertical members 1? A. Yes.

Q. Where was your company located at the time the Shell towers were erected. A. San Francisco. [191—55]

Q. For how long a time did you continue your plant here in San Francisco and office?

A. Until the latter part of 1922.

Q. How long had you been in business as erecting engineer in 1915? A. Since 1908.

Q. Will you just briefly give us your experience with reference to this particular matter, as to where you got your technical training, and what training you had right up to the time of the inquiry of the Mitchell-Tappen Co. in regard to cooling towers at the end of 1914?

A. I graduated in 1907 from the Department of Mechanical Engineering at Stanford University, and immediately became engaged in my profession with a concern which I believe, was called the Stand-



(Testimony of Carl F. Braun.)

ard Engineering Construction Company; shortly after that they formed a separate company to handle particular mechanical lines and mechanical business, carrying on construction of power plants, and pumping plants, and the like, and I think in the latter part of 1908 my associates and I bought the company, and I became president of it; we engaged, as constructing mechanical engineers, in designing power plants, pumping plants, we built a number of municipal water works, we installed large condensing equipment, a number of large tanks, built, I think, two complete municipal water works, designed some boiler plants, electric generating stations and similar work. We purchased a large part of the machinery from Eastern connections and sold it either unerected or erected, or incorporated in these plants. Among the people that we did considerable business with was the Alberger Pump & Condenser Company, which built condensers, cooling towers, centrifugal pumps, and like apparatus. We built for the Standard Oil Company a large cooling tower, which we purchased from the Alberger Pump & Condenser Company [192—56] and erected; that was erected at Richmond. The Alberger Company were quite set in their opinion regarding the fan type of tower, and after I had seen the superior performance of the open atmospheric type of tower I several times urged upon them the construction of such a tower; the open, atmospheric type of tower had been used for years by refrigerating plants.

(Testimony of Carl F. Braun.)

The COURT.—Before that the removal of heat was by compression and expansion of ammonia?

A. Yes, but in refrigerating plants very low temperatures are required, and the more heat that can be removed by the cooling tower the more economical the plant will operate, because the removal of heat by compression and expansion of ammonia is very expensive. It is much cheaper to remove it with the cooling tower. It is not only necessary to remove large quantities of heat, but to remove the heat at low temperatures.

In 1915 I received a letter from the Alberger Pump & Condenser Company enclosing a copy of an inquiry—

Mr. FOULDS.—I object to the statement of the contents of the communication.

The COURT.—What is the materiality of it, anyway?

Mr. TOWNSEND.—I was coming to that in a minute, how he came in contact with the Shell Company first.

The COURT.—I cannot see what difference that makes. It is admitted here that the Shell Company plant was built under a license or permission from the plaintiff.

Mr. TOWNSEND.—In the depositions taken in New York and the correspondence that has gone in there, they have created the picture that Mitchell-Tappen Company called Mr. Braun's attention to the Shell Company, and that he stole their cooling tower and their client. We will show Mr. Braun

had a tip in regard to this Shell matter from an independent concern, and [193—57] earlier.

The COURT.—What difference does it make how he got the business? He built that plant under the license, or upon the plans of the plaintiff; that is conceded, is it not?

Mr. TOWNSEND.—Absolutely, there is no question about it.

The COURT.—The question as to how he came to do business with that plant is not involved in the question as to whether there has been an infringement since. Does it bear upon the question of the prior art, or validity of his patent that is set up in your answer?

Mr. TOWNSEND.—It ties in with the history of the art, and Mr. Braun's familiarity with the cooling tower business.

The COURT.—Are you intending, Mr. Townsend, to assail the plaintiff's patent in the manner set up in your answer, that is, on the basis of the prior art, or anticipation?

Mr. TOWNSEND.—Yes, your Honor.

The COURT.—I think if that is material that is part of your case.

Mr. TOWNSEND.—I think it is.

The COURT.—I do not think it is proper at this point on cross-examination of plaintiff's witness.

Mr. TOWNSEND.—I will reserve that, if I may, for my own case.

The COURT.—Yes.

Mr. TOWNSEND.—Mr. Braun might complete

(Testimony of Carl F. Braun.)

that preliminary statement, and omit the correspondence he had with Alberger.

The COURT.—All right.

Mr. TOWNSEND.—And then I will check that up later.

The COURT.—I think he had best omit the correspondence at the present time. [194—58]

Mr. TOWNSEND.—Have you anything further to add about your connection with air-cooling problems up to the time of the building of the Shell plant in 1915?

A. I have been very familiar with the heat transfer problems, and I have made a specialty of heat transfer apparatus, for transferring heat from one fluid to another, and early in 1915 I presented a paper on the subject to the American Society of Mechanical Engineers, dealing particularly with heat transfer in a condenser.

Q. Have you ever employed a construction at any time anywhere except these first two towers that you purchased from the Mitchell-Tappen Co. and put up at Martinez for the Shell Company in 1915, wherein such a construction was used as shown either by the plaintiff's patent in suit, or illustrated in this model, Exhibit I? A. No.

Mr. FOULDS.—I object to the question in that form. Counsel has these bars in his hand; if he refers to the bars—

Mr. TOWNSEND.—I am referring to deck bars.

Mr. FOULDS.—The question as drawn was indefinite.



(Testimony of Carl F. Braun.)

Mr. TOWNSEND.—I accept the amendment.

The COURT.—It is pretty general, but you are practically asking him whether or not he has ever infringed, aren't you?

Mr. TOWNSEND.—I did not want to do that, because I have not any right to ask that question.

Q. Referring to plaintiff's patent in suit, Mr. Braun, or to the model, Exhibit I, have you ever employed slats with underneath grooves such as shown in Fig. 2 or Fig. 3, or any of the other figures of the patent, 1,010,020, which said grooves are shown, or any grooves at all, as may appear on the under side of the slats of the model Exhibit I?

A. No.

Q. What has been the construction of your slats, as far as [195—59] the underneath portion is concerned? A. Plane surface.

The COURT.—What purpose is served by these grooves on the under side?

Mr. FOULDS.—They separate the water running down. I will say when the water runs down, by capillary attraction it comes down in a solid stream, and the groove divides it into two streams.

Mr. TOWNSEND.—Q. Have you ever used side grooves such as appear in Figs. 2 and 3 of the patent in suit, or any grooves at all upon the sides of the slats? A. No.

Q. Have you ever used members which are termed splines 7 in the patent in suit in any of your constructions?

Mr. FOULDS.—I object to that, if your Honor



(Testimony of Carl F. Braun.)

please, on the ground that that is the question in issue here. If the question is directed to the exact spline shown there I have no objection to it.

The COURT.—I do not think that the statement that he is not using that particular member would amount to much one way or the other. In other words, it would be the mere opinion of the witness in any event as to whether the member that he used was the same or was substantially the same.

Mr. TOWNSEND.—I was not seeking to do that.

The COURT.—I will allow the question.

Mr. TOWNSEND.—I think we have shown what he is using, but whether or not at any time he has used anything else, that was the scope of my question. A. No, we have not used that.

Q. Have you ever used in your deck construction any other construction than such as you have described and illustrated by the models that you have referred to?

A. Only some decks that we nailed down without any other method of spacing or securing them. [196—60]

The COURT.—You mean since the time that you added this addition at the Shell Company that your installation has been practically the same as shown by your large model?

A. Yes, with the exception of when we nailed the boards down.

Mr. TOWNSEND.—I think it has already been made clear what he did use in that addition.

The COURT.—Yes, I understand that.

(Testimony of Carl F. Braun.)

Mr. TOWNSEND.—Q. In adding this extra portion to the Shell construction at Martinez in 1916, did you employ or use the blue-prints or specifications which had been furnished you by the Cooling Tower Company, or the predecessor, the Mitchell-Tappen Co.?

A. No. I am under the impression that they had been returned to Mitchell-Tappen Co.

Q. What was the occasion of your building the towers for the Shell Company in 1920?

A. The deterioration of the original towers to a point where they were unsafe.

Q. So those were torn down and you put up your new towers? A. Yes.

The COURT.—We will take an adjournment now until to-morrow morning at ten o'clock.

(An adjournment was here taken until to-morrow, Wednesday, November 28, 1923, at ten o'clock A. M.) [197—61]

Wednesday, November 28, 1923.

C. F. BRAUN, cross-examination (Resumed).

Mr. TOWNSEND.—Q. I believe, Mr. Braun, when you were testifying yesterday in regard to wind pressure upon these towers you inadvertently referred to the pressure as 30 pounds per square inch. Was not that an oversight on your part?

A. Yes, if I said 30 pounds per square inch, it was an oversight; 30 pounds per square foot would be the proper figure for wind pressure.

Q. You desire that correction to be made?

A. Yes.

(Testimony of Carl F. Braun.)

Q. Some criticism has been indulged in by plaintiff's counsel of your use of cuts of the Shell 1915 towers in your advertising literature. Will you just tell what use you actually made of those cuts, and how you used them?

A. I remember that we published a bulletin, and that we used a photograph of the tower that we erected at Martinez; we took these photographs and made cuts of them and showed cuts on one of the pages of this bulletin. We were then operating as construction engineers; we advertised as such, and we did not advertise these towers as being patented by us, or as of our own design.

Q. They simply were illustrative of work that you had erected?

A. To show work that we had erected.

Mr. FOULDS.—Objected to as leading.

A. To show work that we had erected as the construction engineers.

Mr. TOWNSEND.—Q. Was that any different policy than you had followed in any other case?

A. We followed that policy altogether at that time.

Q. Is that a policy that is common with erecting engineers, [198—62] to point to work that they had done?

A. I think that it is a very common policy.

Q. You were interrogated by plaintiff's counsel in regard to the name plates with patent numbers thereon, and which appeared to be referred to in a letter from the Cooling Tower Company to

(Testimony of Carl F. Braun.)

you, or to your company, Plaintiff's Exhibit No. 7, the letter being dated July 19, 1915. Will you state whether or not, if you received those plates, they were likely put in place or otherwise?

A. In the ordinary course of business they would be put in place; I have no recollection of their not having been put in place.

Q. Was there any reason why you should not put them in place?

A. I have no reason whatever to believe they were not put in place.

A. You have referred to the redistributing decks used in your towers, and which I believe there is no controversy over, which are shown in what we call your first patent, being the Braun patent of 1920, Exhibit "B." Had you ever known or had any knowledge of the use of redistributing decks prior to your invention thereof?

A. I had never seen anything of that nature.

Q. I believe you have already stated the reason for developing the distributing decks.

A. In my describing of the tower I have stated that. The need of redistributing decks was first observed by me at Martinez, where the wind blows rather strongly through a draw in the hill; I noticed there that the wind was blowing successively, or progressively, from the windward to the lee side of the tower, and it was to overcome that difficulty that we developed the redistributing deck.

The COURT.—There is a brisk wind that prevails over there?



(Testimony of Carl F. Braun.)

A. There has been a brisk wind whenever I have been there; in the particular location of the towers, there is a gap in the [199—63] hill.

Q. I had occasion to study that in connection with a case that I had.

Mr. TOWNSEND.—These original towers, I understand, had no provision for that?

A. No, those towers had no redistributing deck.

Q. You may state whether or not the construction of floor joists, extensions, and connections to the louvers, by which you accomplished that result that you pointed out, and which construction is shown in Model D, forms the subject-matter of any patent of yours? A. Yes, our second patent.

Q. That is the second patent set up in the counter-claim.

Te COURT.—Which one is that.

Mr. TOWNSEND.—That is the second patent.

The COURT.—Which construction are you speaking of now?

A. The extension of the deck supporting members beyond the columns, so as to receive the louvers. My counsel referred to my first patent as 1920; I think that is in error. I think the first patent was 1919.

Mr. TOWNSEND.—I have forgotten the date. It is Exhibit "B."

Q. You were asked on direct examination if you had notified the Cooling Tower Company of the proposed extension to the Shell towers, and which



(Testimony of Carl F. Braun.)

extension you proceeded to put up in 1916. Was there any reason why you did not go to that trouble?

A. Yes, there were many reasons.

Q. Just state the circumstances.

A. I found that the Mitchell-Tappen Co. had very inadequate or practically no facilities for manufacturing cooling towers, and I found that the structural design was very poor; I found that the distinctive features of their tower were on very limited details; and I found [200—64] that a number of their details were highly impracticable.

Q. What were those details that you particularly refer to, that were impracticable?

A. The most important of these details, as far as impracticability was concerned, was a spline. In a tower of this character, there is a large quantity of deck lumber to be installed. These boards are usually 18 feet long; they are frequently warped out of shape when they are received on the site of erection, and to endeavor to place little splines between these at short intervals between two of these long boards and to keep them there until you can secure the board in place is almost an impossible task, and at best an extremely costly process.

Q. What experience did you have, if any, with the use of splines on that particular job? You might further explain just how these splines were placed, and why.

A. The deck boards are fastened by nails or lag screws at the support. The purpose of the

(Testimony of Carl F. Braun.)

spline is to space the deck boards, to space and maintain the space of the deck boards between the supports, at any point where spacing may be required. These are loose splines, and are supported by the grooves in the deck boards at any point without the need of a deck supporting member.

The COURT.—You mean that they will keep the space without any device on the deck-supporting member: Is that what you mean?

A. I mean, if I may show you this model, this is the deck member, which is secured permanently at the supporting point. Of course, this may be a continuous board, but it may come to another support under the board, and a nail might be driven through the board, as on this. These boards are fastened to the transverse members, and secured by nails or lag screws, [201—65] or similar devices.

Mr. TOWNSEND.—Q. Model I.

A. They are not secured to these transverse members by the splines; they are spaced and held in position at these supports by the fastenings, regardless of the splines. In between these deck supports, which are several feet apart, Mr. Coffey apparently thought it would be necessary to provide some spacing members in between the supports.

Q. The object being if these boards warped laterally they would hold them apart?

A. They would hold them apart. They are already spaced, these members being nailed down;

(Testimony of Carl F. Braun.)

they are shown in this model, which is marked Exhibit "H," which is exactly according to the patent drawings, and they are in actual construction nailed and secured at this support. The loose splines form spacing members in between these supports, and by reason of the grooves they cannot fall out, they are free to slide wherever it is necessary. The idea of the spacing block, of course, is very common in the construction of any floors, or banisters, or lattice-work, where, at a point of support one part is nailed down and then a spacing block put in, and another nailed down. But this is something different. It is a spacer in between the support, which is free to be placed at any point, and is, itself, supported by the two boards.

Mr. TOWNSEND.—I would call the Court's attention to the fact that the model Exhibit "H" is a counterpart of the drawing of the Coffey patent in suit, Fig. 6.

The COURT.—Yes, I observed that yesterday.

A. I wish particularly to show that the spacing of the boards at the point of support is not dependent upon the spline, but is dependent upon the fastening device, nail or lag screw, or [202—66] similar mechanical device.

Mr. TOWNSEND.—Q. In the plaintiff's construction, put up at the Shell Company, were the nails driven directly through the deck boards?

A. They were driven through the deck boards.

Q. Did you have any complaint from the erecting

(Testimony of Carl F. Braun.)

force up there at the time the Shell towers were going up, in regard to the splines you have spoken of?

Mr. FOULDS.—I object to that.

The COURT.—I will admit it. By “erecting force,” you mean the employees?

Mr. TOWNSEND.—Whoever did the job, and what knowledge Mr. Braun had of the thing.

A. We had complaints that the installation of these small splines was a very difficult and impractical task, and for the reason that I have explained previously in my testimony to-day, bearing in mind that these spaces are several feet, and the boards are possibly 12 or 18 feet long, these splines swell also, and it was very difficult to get them in and very difficult to keep them; in order that they will not fall out, they have to be made of fairly tight fit, and the result is the splines have to stand more than the board does; it is almost impossible to get them in the slots.

Q. How did the use of the splines in plaintiff's construction compare with the use of your bent metal strips appearing in your patent Exhibit “B,” as shown in the Model Exhibit “E”?

A. The brass strips used by us and shown in my first patent are used only at the transverse deck-supporting members, and are securely fastened to them. Their purpose is to secure the deck boards to the transverse deck-supporting members, and to allow of longitudinal expansion of the deck boards. [203—67]



(Testimony of Carl F. Braun.)

Q. The deck boards are not fastened to the supporting member at all except by the bent portion of these strips? A. Yes.

Q. That is, they are not actually fastened to the supporting member at all?

A. These strips could be considered as a series of staples; for instance, the same result would be obtained, approximately, if a staple were driven over the boards into the transverse supporting members.

The COURT.—Do they have any effect whatever upon the lateral swell of the deck boards between the supporting members?

A. They have no effect whatever. They are not used between the supporting members.

Q. You have no device, then, in your installation, corresponding to that wooden spline?

A. We have nothing whatever. We have on the deck securing members at the deck supports. The advantage of this strip, one of the advantages of a continuous strip of this fastening over a staple would be that where a staple such as that one, for some reason, became loosened, that particular deck board might be loosened by the wind and be blown out, but with a continuous strip, if one or more of these nails fastening the strip down became loosened or pulled out, the other nail in the strip will still hold that strip down, as a more or less effective member, and will prevent that board being blown away.

Mr. TOWNSEND.—I do not know whether the



(Testimony of Carl F. Braun.)

Court asked you if the deck boards in your construction were nailed down to the cross members.

The COURT.—I assumed apparently not, because otherwise they would have no effect on longitudinal expansion.

Mr. TOWNSEND.—Q. Now, at the time that you had that Shell job under erection in 1915, did you have any other troubles [204—68] with any material furnished by the Mitchell-Tappen Company, and, if so, what?

A. We had a great deal of trouble with the structural steel work; the structural steel work was composed of very light members; they had been shipped and rehandled a great many times, and had been seriously damaged, and, I believe, that they came from some structural company up in New York, and were shipped to New York by rail, or possibly river steamer, transferred to a steamer for San Francisco, and then transferred by steamer up to Martinez; the structural steel was in very bad condition when we received it. Many of the castings were broken, too.

Q. I do not know whether it was made clear in regard to the louver construction of the Shell towers in 1915 and the tower of 1916, and your present construction of louvers. Will you indicate that?

A. I would like to use the model for that.

Q. You may do that.

A. In the Shell tower the lumber was delivered in random lengths, it was not cut to length, and

(Testimony of Carl F. Braun.)

was laid on top of the 45 degree members for supporting these louvers, in a manner similar to the way a floor is laid—they were not put up in panels. The boards were joined at random points, and were nailed together. The louvers were held down against the 45° members by a loose-fitting bolt passing through a slotted hole; that is, the angular member for supporting the louver had slotted holes in it, and bolts were screwed through the louver to hold that down so it would not blow up. The distinctive differences between the louvers of the original Shell towers and the towers that we are now building is the fact that they were not in panel, and that they were not rigidly fastened to the angular members in such a manner as to give structural strength. [205—69]

Q. Can you state generally what the volume of business is that you have done in the cooling tower business and are doing to-day?

A. I have in mind that the figures for 1922 were somewhat in excess of \$500,000. The other years I do not have clearly in mind, but there were large sums in the year preceding that.

Q. Are there any other concerns building wooden towers?

A. The Cooling Tower Company of New York is building wooden towers.

Q. For what period of time, to your knowledge?

A. At least one year.

Q. Is there a distinction between an all-wood tower and a composite tower of metal and wood?

(Testimony of Carl F. Braun.)

A. I do not understand the question.

Q. Is there a difference in them, as a matter of erection, durability, etc.?

A. There are many advantages of an all-wood tower. One of the great advantages is durability of the tower. Towers which have steel in them will under many conditions corrode very rapidly. Cooling towers are subjected to very corrosive influences; the water passing over them is warm; frequently, it is highly impregnated with salt, due to concentration in the steam, and they are freely exposed to air, providing the oxidizing agent for oxidizing the steel parts. For that reason, a tower made of wood, particularly redwood, which has rot-resisting qualities, and with fastenings of some highly corrosive resistant substance, such as brass or copper, is far superior to a tower having steel members.

Q. What proportion of the framework of that original Martinez installation was of steel—what members were of steel?

A. The columns and the brackets supporting the louvers, the tie rods, and I believe some structural members joining the [206—70] columns; in fact, I believe that all members giving structural strength to the tower were of steel.

Q. Prior to the development of the wood tower construction by your company, to what extent were wood towers in vogue, if at all?

A. Wood towers have been in general use for a great many years; many of them were home-made

(Testimony of Carl F. Braun.) -

affairs, built by the customers, and sometimes were called bird-cage towers; some of them were made with lath; most of them were rather flimsy, and they were made almost entirely on the top floor as a house is built, not fabricated, and for that reason were usually costly.

Q. Can you state any outstanding distinction between these home-made bird-cage affairs you speak of and the towers you have developed and shown in your patent?

A. Our tower has greater structural strength and rigidity, which is a very important feature in the cooling tower, which, for proper performance must be exposed freely to the prevailing wind. Our tower also has a great advantage of being constructed in units. It is a manufactured tower fabricated at a factory, shipped in units, such for instance, as the louver panels, which are assembled and bolted together at the site of erection, at a minimum cost for field labor. The saving in field labor not only effects an economy, but it results in a better structure. A structure, the majority of the parts of which are built in a factory, which can be properly controlled, will be far better mechanically than a structure, a large portion of the work of which is done in the field which may be at remote places, such as oil fields and mines, or other locations where skilled labor is difficult to secure.

Mr. TOWNSEND.—That is all.



(Testimony of Carl F. Braun.)

Redirect Examination.

Mr. FOULDS.—Q. In some of your towers guy wires are used, [207—71] aren't they, to support the tower?

A. Not that I know of. They may be added by a customer.

Q. Don't you know that guy wires have been added to keep your tower rigid? A. No.

Q. Do you know of a tower at Ventura that is—you put up a tower at Ventura, didn't you?

A. Yes.

Q. Don't you recall that that tower is guyed?

A. No.

Q. When have you seen it last?

A. What tower do you mean at Ventura?

Q. The General Petroleum, I think.

A. I have never seen the General Petroleum tower at Ventura.

Q. How do you know, then?

A. I do not think we have a General Petroleum tower at Ventura.

Q. Do you recall that the Cooling Tower Company told you of an entirely wood tower in which even the pins were wood, constructed ten years ago?

A. No.

Q. Do you remember that they told you of the desirability of using all wood for some kinds of water, and all steel in other cases? A. No.

Q. Didn't you discuss that with them?

A. Not that I remember.

Q. You knew of the third Coffey patent entering



(Testimony of Carl F. Braun.)

into the Shell tower construction at that time, didn't you? A. No.

Q. Didn't you know the patent referring to the bracing? A. No.

Q. Did you ever see that patent?

A. I have seen it.

Q. Where did you first see it?

A. I don't remember.

Mr. TOWNSEND.—That patent isn't in suit, so I do not think any inquiry of that sort is pertinent, at all.

A. The third patent does not appear on the name plates, and was not known to us in any way.

Mr. FOULDS.—Q. Do you consider that the Cooling Tower [208—72] Company's structure does not give any rigidity or support to the tower?

A. No.

Q. Have you seen this patent No. 1,158,107?

A. I believe that I have examined this patent.

Q. And that is the Cooling Tower Company's construction of the side bracing which you have attempted to show in this model G, is it not?

The COURT.—Which is the part you call the side bracing?

Mr. FOULDS.—I refer to the bracing of the tower.

A. This model was to show the construction of the tower at Martinez.

Q. Isn't that what was shown in the prints which were sent to you in 1915? A. What?

Q. That bracing shown in that patent.

(Testimony of Carl F. Braun.)

A. This bracing does not agree with the prints.

Q. In what respect? Refer to the prints which were shown you yesterday, and then refer to that patent, and tell us in what respect it does not agree?

Mr. TOWNSEND.—If your Honor please, I do not see where this *material* is material.

The COURT.—I should think if these drawings were made and the installation at Martinez was constructed in accordance with any existing patent that belonged to the plaintiff it would be material.

Mr. TOWNSEND.—There is no charge of infringement of this patent.

The COURT.—In either event, if the matter, as shown by the drawings and included in that installation were subsequently patented or patented before that it would be material here to show the invalidity of the defendant's patent. [209—73]

Mr. TOWNSEND.—If it has that bearing, but it seems so far-fetched and against the actual fact—

The COURT.—Whether it is against the actual fact is another proposition, but if a man holding a patent for a complete installation supplies drawings, including details which are then subject to the patent, and which become the subject of a subsequent patent, isn't that material as bearing upon the question as to whether or not the man who constructed or put in an installation on those drawings has himself a valid patent?

Mr. TOWNSEND.—I am afraid your Honor has confused two thoughts, there. Of course, there is

(Testimony of Carl F. Braun.)

no controversy over the right of Mr. Braun to have erected the Shell towers, he having bought these towers from the plaintiff, and everything having been settled at that time—in regard to the Shell towers there is no question of infringement of any of these patents.

The COURT.—No.

Mr. TOWNSEND.—Now, on the question of anticipation, to show the state of the art, the plaintiff, or either party, is of course entitled to offer that patent, whether it is his own or somebody else's, to show the state of the art, with a view to limiting the features of the patent in controversy. That right of Mr. Fould's exists, independent of any patents under which that tower was erected, or any patent owned by his company.

The COURT.—That is undoubtedly true, but isn't he entitled to question that by showing that the particular details involved in that construction were made the subject of a patent?

Mr. TOWNSEND.—It would be applicable if this patent shows [210—74] a construction of the Braun tower as patented. If it had that bearing, I withdraw my objection.

The COURT.—I apprehend that is what Mr. Foulds is driving at.

Mr. FOULDS.—The witness has devoted a great deal of time to explaining his bracing, and the merits of his bracing. As a matter of fact this patent shows that he appropriated the very idea that we had had patented, the very idea that

(Testimony of Carl F. Braun.)

is in that tower; that all of that talk of his bracing is ours.

The COURT.—To my mind it is clearly material.

Mr. TOWNSEND.—All right. I had not considered for a moment that they would set up a structure like this as an anticipation of the Braun patent, but if that is part of the defense of that, well and good.

Mr. FOULDS.—Read the question, Mr. Reporter.

(Last question repeated by the reporter.)

A. The drawings do not show the structure, and, therefore, are not comparable with the patent.

Q. The drawings show the structure diagrammatically, do they not?

A. Not these drawings; possibly there are some other drawings. Your question is in what way they did not agree?

Q. Whether the structure shown in this blueprint which you are looking at is not the structure shown in the patent which I have shown you, 1,158,107.

A. As near as I can tell from a cursory examination, the structure is about the same.

Q. Do you mean to say now that the structure erected at the Shell plant did not get any rigidity or structural strength from the louver-supporting members and louvers?

A. The louver-supporting members and louvers did not add to the ability of the structure to resist wind pressure. [211—75]

Q. Don't you know that the object of the in-



(Testimony of Carl F. Braun.)

ventor of this Coffey patent shown you, as stated by him, was to attain that very rigidity by his structure at the Shell plant?

A. I do not know that.

Mr. TOWNSEND.—That is objected to as argumentative.

Mr. FOULDS.—Don't you know that?

A. I don't know that.

Q. Have you read the patent?

A. Not for a long time.

Q. When did you read it?

A. Possibly a year ago.

Q. Not before that?

A. I don't remember when I read it.

Q. When you saw the patent numbers on the plaintiff's name-plate didn't you get copies of those patents and examine them?

A. This patent number was not on the plaintiff's name-plate.

Q. Are you sure of that?      A. Yes.

The COURT.—This application was filed June, 1914; the date of the patent is October 26, 1915. When was the Martinez tower erected?

Mr. TOWNSEND.—The letter was in July, 1915, several months before that patent issued. I think that answers counsel's question.

The COURT.—It was pending at the time.

Mr. FOULDS.—I offer in evidence letters patent to Barton H. Coffey, No. 1,158,107, dated October 26, 1915, issued to the Cooling Tower Company, as assignee of Barton H. Coffey.



(Testimony of Carl F. Braun.)

(The patent was marked "Plaintiff's Exhibit 50.")

I also offer in evidence the five sheets of blue-prints for the Shell tower erection, 105, 59, 109, 108, and 115, being the blue-prints referred to by the witness, and which were marked by him yesterday.

(The blue-prints were marked Plaintiff's Exhibit 51.)

Mr. TOWNSEND.—Unless Mr. Braun has some reason to question [212—76] the correctness of these drawings, I have no objection to them.

The WITNESS.—I have no reason to.

Mr. TOWNSEND.—I will take counsel's word that they are O. K.

Mr. FOULDS.—Q. You spoke of returning these drawings to the Cooling Tower Company, and you said you thought you had no copies when you made the extension.

A. I believe they were.

Q. Do you remember writing to the Cooling Tower Company after you had completed the original tower, and asking for additional copies of the drawings. I call your attention to the letter of August 12, 1915, addressed to the Cooling Tower Company, asking for three complete sets of the detail plans, and your letter of November 26, 1915, asking for extra prints.

A. The letter of August 12 I can identify.

Q. Does that refresh your recollection?

A. I can identify that letter.

Q. And you did get additional prints, didn't you?

(Testimony of Carl F. Braun.)

A. I don't remember.

Q. You don't remember whether you received them, or not? A. No.

Mr. FOULDS.—I offer these letters in evidence as Plaintiff's Exhibits 52 and 53.

Mr. TOWNSEND.—At the request of plaintiff's counsel, I hand him a blue-print, Defendant's Exhibit "A" for identification.

Mr. FOULDS.—Q. Do you identify both of these letters? A. Only one of them.

Q. Don't you recognize both of these letters?

A. Only one was written by me; I could not identify the other.

Q. Do you recognize the signature on both letters?

A. No, I do not recognize the signature on this other letter. [213—77]

Q. Do you know who Mr. C. H. Shattuck is?

A. Yes, he was the engineer of our company at that time.

Q. Is that his signature?

A. I don't know; it does not look like his present signature. Mr. Shattuck is here and you can ask him.

The COURT.—Ask him now.

Mr. SHATTUCK.—That is not my signature.

Mr. TOWNSEND.—Mr. Shattuck says that undoubtedly he dictated that letter but did not sign it. We will not question the fact that it emanated from the defendant company. That letter explains why these blue-prints were requested; apparently,

(Testimony of Carl F. Braun.)

the Shell Company wanted them to complete their files.

Mr. FOULDS.—That is what you say in the letter, Mr. Braun.

A. That is said in the letter, yes.

Q. As a matter of fact, didn't you get up this drawing, Defendant's Exhibit "A" for identification, from the plaintiff's prints 105?

A. We made use of plaintiff's print 105.

Q. In getting up what?

A. In getting up the drawings; it was necessary to make these towers architecturally similar.

Q. You decided, if possible, to get the benefit of that installation, and evade plaintiff's patent, didn't you?

Mr. TOWNSEND.—I object to that as a reflection highly unwarranted.

The COURT.—You are not asking for any fact. You are asking the witness to convict himself. That is too much to expect of anybody. I will sustain the objection.

Mr. FOULDS.—Q. You adopted these spacing fingers as a means of spacing your slats and holding them loosely so that they could expand longitudinally, didn't you? [214—78]

Mr. TOWNSEND.—To make the record clear as to counsel's definition or understanding of spacing fingers, he is referring to this angle iron—

The COURT.—I assume that is the only thing there that you could possibly call the spacing finger on that second installation at Martinez.

(Testimony of Carl F. Braun.)

A. I use an angle iron to secure the deck to the transverse deck-supporting members, and to form a template to properly secure the deck boards in position.

Q. What do you understand a template to be?

A. A template is a device definitely fixing one or more dimensions.

Q. Do you call this spacing finger in your so-called angle iron shown in Exhibit "K" a template?

A. I call the entire angle iron a template.

Q. Those spacing fingers of the template might then be called what?

A. Spacing blocks, or fingers.

Q. Or splines?      A. No.

Q. You would not call them splines?

A. I would not call them splines.

Q. What do you think would be the distinction that would take away that definition?

Mr. TOWNSEND.—I suggest that the file-wrapper is a pretty good dictionary to turn to as to what a spline means.

Mr. FOULDS.—I think the witness' own use of the word "spline" shows what it means in his patent.

A. These are projections from solid members.

Q. Can a spline be a projection from a solid member?

A. I think it would be stretching the definition of a spline.

Q. Why?

Mr. TOWNSEND.—I believe that the examina-



(Testimony of Carl F. Braun.)

tion is growing speculative now; it is not calling for a contrast of two [215—79] actual structures, it is calling for a hypothetical answer.

The COURT.—No, I do not think it is. The witness made a clear distinction between the movable member which he called a spline, and the fixed member, which he said was not a spline. It is proper to ask why isn't it. I will overrule the objection. Why do you say that is not a spline?

A. Because a spline is essentially a loose member. These fingers are projections from a continuous solid member.

Mr. FOULDS.—Q. That, then, is your distinction, that your plate is fixed?

A. You refer to the entire member?

Q. Which you call the template.

A. You were speaking of the finger, weren't you?

Mr. FOULDS.—Read the question.

(Last question repeated by the reporter.)

A. (Continuing.) That is the distinction.

Q. I understand you to tell us that your finger spacers cannot be called splines because they were secured or fixed in position: Is that correct?

A. The distinction between our member and splines is that ours is deck-securing members securing the deck to the transverse deck-supporting member; and the splines do not secure the deck to any deck member. That is the difference between the splines and the member that we have used.

Q. Is that the general definition of a spline, or



(Testimony of Carl F. Braun.)

do you refer to a particular spline which you have in mind?

A. I am explaining the difference between our angle construction and the spline used in the Martinez tower.

Q. So there are different kinds of splines, are there?

A. Yes, there are different kinds of splines.

Q. You use one kind of spline, as described by your patent before the Court, don't you?

A. Yes. [216—80]

Q. And that was a correct use of the word "spline"?

The COURT.—If you stuck a lag screw in there and fastened these moveable members, would it then be proper to call it a spline? A. I believe so.

Q. Then the distinction in your mind between a spline and the angle iron which you used on that second installation, or these brass strips you use on the present installation, is that this spacing device was placed between the supporting members, whereas on your own installation the brass strips serving the purpose of spacing at the supporting members, were attached to the supporting member?

A. Yes.

Mr. FOULDS.—Q. Is this Exhibit "H" to which the Court has just referred, a duplicate of anything that you have seen? A. No.

Q. It is merely a theoretical rendition in physical form of what you think Fig. 6 of the Coffey patent in suit shows?

(Testimony of Carl F. Braun.)

A. It is made to the drawing of the Coffey patent.

The COURT.—Was this Exhibit “H” an installation that you used in the first Martinez plant?

A. Exhibit “H” is drawn from the patent.

Q. I understand. Did you use these splines in the Martinez plant?

A. We used splines in the first Martinez tower.

Q. The same as these?

A. Approximately the same.

Mr. TOWNSEND.—If your Honor would turn to the patent, you will find that there is a structure called for in the patent of longitudinal spline members and end spline member, as well as intermediate spline members. It is a complex affair.

A. In the Coffey patent, this member is referred to as a spline, and this angle iron is referred to as a spline. I really think that the word “spline” has been used rather [217—81] loosely in a number of cases.

Mr. FOULDS.—“Spline,” then, has a general but loose application to spacing members.

Mr. TOWNSEND.—The file-wrapped has so definitely fixed that fact, that it is the best evidence of the meaning of the word “spline” as used in the patent. They attempt to get claims which would cover any sort of spacing member, a wooden block put in there, and they were refused claims, and they were finally compelled to take the limited claims that they have got in their patent on loose spline work. Your Honor has not had an opportunity to examine the history of the patent, in the

(Testimony of Carl F. Braun.)

file-wrapper. I was going to ask counsel if he was contending for a construction of his patent which would cover any sort of a block of wood in there.

The COURT.—At any rate the evidence shows now that defendant is not using any spacing member whatsoever between the supporting members.

Mr. TOWNSEND.—No, and as far as we know defendant has never used any except under a proper agreement with the plaintiff in the first two Shell towers. The word “spline” has a very specific meaning in this patent, and I think it is too bad to waste so much time in getting away from that, because it is my purpose to introduce the file-wrapper, and introduce the references that were cited, so you will see just what the metes and bounds of those claims are.

The COURT.—I infer that the word seems to include almost any sort of a spacing block or a member of any kind. Is that a matter of general engineering practice, that the word is quite generally used to indicate anything that holds apart other members and serves no other purpose? [218—82]

The WITNESS.—I consider it to mean specifically a member working in grooves between two other members, but it has been used more generally in both these patents. In the Coffey patent this supporting member at the end is called a spline, and in my first patent the board nailed down on top

(Testimony of Carl F. Braum.)

of the deck is called a spline. So possibly there is a rather loose use of the word "spline."

Mr. FOULDS.—Q. What were the first towers that you erected after the Shell refinery towers at Martinez?

A. I would have to look up the records to find out.

Q. When you first started to do that, you placed your louver boards vertically, didn't you, up and down?

A. We built a tower with vertical louver boards.

Q. That is the tower shown in your catalog?

A. Whether that is the first one, or not, I am not certain.

Q. Examine Bulletin No. 101, Figure 49.

A. Yes, we built such a tower.

Q. Where and when was that built?

A. That tower, I believe, was built at Coalinga, at or near Coalinga.

Q. About when?

A. I cannot say without looking up the records.

Q. Can you tell approximately?

A. I would say a year more or less after the Martinez towers. It is very difficult for me to tell without looking up the records.

Q. When did you abandon that method of construction of louvers?

A. I believe we built one tower only that way.

Q. Did you do that in order to get away from the plaintiff's bracing structure? A. No.

Q. You originally used long, random-length mem-



(Testimony of Carl F. Braun.)

bers in your towers, didn't you, a sample of that being shown on Fig. 40 of your Bulletin No. 101?

A. Figure 40 of our bulletin was a later installation. [219—83]

Q. Those are boards of random lengths, aren't they?

A. These were boards of random lengths.

Q. They are not of panel construction, such as you have shown here?

A. They are not panel construction.

Q. How long did you continue to use that structure?

A. I cannot answer that accurately; I believe that we used that structure during 1918.

Q. Was that abandoned?

A. That also was abandoned.

Q. When did you adopt the triangular angle iron to hold the louvers?

A. I cannot state that accurately. We were using them in the early part of 1918, and I believe slightly earlier.

Q. Did you abandon them?      A. The angles?

Q. Yes.      A. Yes.

Mr. TOWNSEND.—Q. You refer to the angle iron supports for louvers that appear in the first Braun patent Exhibit "B"?      A. I presume so.

Mr. FOULDS.—I refer to the angle iron shown in 1,334,515.

Mr. TOWNSEND.—Q. What element?

Mr. FOULDS.—Element 19.

A. Might I look at that?



(Testimony of Carl F. Braun.)

Q. During what period did you nail down your slats or drip bars?

A. I don't think that we ever have nailed down the drip bars.

Q. Do you make a distinction between distributing bars and drip bars?

A. If you will show me what you mean I will try and answer.

Q. I refer to the element that you have marked "F" in this Exhibit "E." You testified yesterday, as I understood it, that at one time you nailed down these directly without using your spacers.

A. We have nailed decks down at different times. I remember some towers that we nailed the decks down on approximately [220—84] a year and a half ago.

Q. Did you find that unsatisfactory?

A. We found it unsatisfactory.

Q. What was your object in adopting these metal strips that you have called "H"?

A. To secure the deck boards to the transverse members.

Q. And also to space them?

A. In such a manner that the failure of one fastening would not cause a falling apart of any of the structure, and to permit of individual longitudinal expansion of the deck boards.

Q. I notice in this Exhibit "E," and also in your actual construction, that some of these spacing straps are much wider than others, and you use a wide, heavy spacing strap at the transverse joist,

(Testimony of Carl F. Braun.)

and a narrow, light spacing strap between the wide spacing straps.

A. No. We use the wide spacing strap at the point where the boards will join. The supports for the deck members are more closely spaced than the length of the board. If a board is to pass continuously by a support a narrow member is sufficient. If two boards are to butt each other then a wide member is necessary, as a contraction of the member might cause it to work from underneath a narrow member and work out.

Q. You used a wide member and then a narrow member, and then a wide member again, running throughout the length of the tower?

A. We might use all wide members, if built from short decking; that would be dependent solely upon the length of the deck lumber.

Q. At the Martinez tower, the wide straps are usually from the supporting posts at the transverse joints and the narrow straps between, aren't they?

A. I don't remember that; it might be. [221—85]

Q. You find very often these narrow spacing straps become loose between the boards, nails come out, or are not put in, don't you?

A. They might come loose. I have not found that it occurred frequently.

Q. You have seen that in some places, haven't you? A. Have seen nails out?

Q. Have seen straps loose, the nails either out or not put in.

(Testimony of Carl F. Braun.)

A. I have seen some of the nails out, yes.

Q. In that case, the spacing strap run across a number of boards without any means for supporting the slats except the crimp in your spacing strap: Isn't that so?

A. It would be if the nails were out, although if the nails were out it is probable that the ribbon would spring so far from the board that it would entirely fail of its function.

Q. Why would the ribbon spring up?

A. Because it is very light.

Q. What would be the force that would cause it to spring up?

A. The strain set up in the ribbon by the punching of the projection.

Q. Is the tendency to bow up?

A. The tendency would be to bow up.

Q. You then think that the deck would contract laterally, instead of expanding?

A. I don't think that the deck would do either.

Q. If the deck remained the same width these straps would not spring up, would they?

A. Yes.

Q. The straps running from side to side of the deck would spring up even though the deck remained the same width? A. Yes, it might.

Q. Do you know that they do that, or is that theoretical?

A. No, I have seen these brass members bow; after they have [222—86] been run through that punch they will not lay flat unless nailed down.

(Testimony of Carl F. Braun.)

Q. Do you know how far they will bow?

A. Not offhand, no.

The COURT.—Is that about life size of these straps?

A. Yes, that is to scale. I believe this was taken actually from our stock in the factory. It looks to me like the stock material. I think Mr. Shattuck will verify that.

Mr. TOWNSEND.—I have seen the tower at the Shell plant, and it looks very much like that. I will ask Mr. Braun to state what the usual length of the brass straps are.

A. The usual length of the brass straps is the width of the tower; the tower ranges in width from 6 to 12 feet.

The COURT.—They are continuous, clear across?

A. They are continuous, clear across.

Mr. FOULDS.—Q. In this Shell extension at Martinez, that you made in 1916, is there a deck consisting of drip bars?

A. There is a deck consisting of longitudinal boards.

Q. There are separate or individual fastenings at each end, with a space in between the bars?

A. This is the addition, now, that you are speaking of?

Q. Yes. There are separate or individual fastenings at each end, with space in between the bars?

A. They are not actually fastened at any place.

Q. They are secured at each end, aren't they?

A. They are secured by these straps at each end.



(Testimony of Carl F. Braun.)

The COURT.—You are talking now of the addition to the 1915 installation?

Mr. FOULDS.—Yes.

The COURT.—Those were not fastened with straps?

A. They were fastened by the angle irons. [223—87]

Q. And the adjacent bars were held in spaced relation at more than one point by a member or device which permits individual expansion of the slats? A. Yes.

Q. There also was a deck consisting of drip bars individually fastened at each end to a horizontal deck frame?

Mr. TOWNSEND.—Might I ask counsel if he is reading from the claims?

Mr. FOULDS.—I am reading from claims 1 and 2 of our patent—from the patent in suit.

Mr. TOWNSEND.—You are paraphrasing it.

Mr. FOULDS.—It is true I am not using the exact language.

A. Will you read the last question?

Q. A deck consisting of drip bars, individually fastened at each end to a horizontal deck frame.

A. No, there are not individual fastenings at each end.

Q. I am talking now of your addition to the Shell plant. A. So am I.

Q. There were not individual fastenings at each end?

A. There are not individual fastenings.



(Testimony of Carl F. Braun.)

The COURT.—Why not?

A. I mean that it is not fastened to that member. They are free to expand longitudinally. It is not fastened with a nail. That is the distinction I am trying to make. It is held in two directions.

Q. It is held in two directions? A. Yes.

Q. That is to say, it is fastened, so far as any lateral expansion goes, and it is held down, it is held fastened, so far as any vertical expansion goes?

A. Yes.

Q. But not as far as longitudinal expansion goes? A. This is not securely fastened.

Q. It is securely fastened, except that it is subject to longitudinal expansion?

A. Yes. [224—88]

Mr. TOWNSEND.—Might I point out to the Court, if your Honor please, that the line of examination that counsel is attempting to follow in reading from the claims is in effect asking this witness to construe the claims, which is the province of the Court. He is asking for a legal construction.

Mr. FOULDS.—I think not. I am asking the witness what he had there.

The COURT.—I think that is so, Mr. Foulds. He has told in the most minute detail what he did have there.

Mr. FOULDS.—As I told Mr. Townsend yesterday, I examined that Shell tower last Saturday, and found through the length of the slats that these straps were loose here and there; the straps were loose, separating members. I do not want to take

(Testimony of Carl F. Braun.)

the stand, but I think it is understood that I would so testify.

Mr. TOWNSEND.—I think it is rather unusual of counsel to put of record any testimony he might want to deduce on behalf of his client.

The COURT.—But, Mr. Townsend, isn't it perfectly obvious that these straps might work loose? Mr. Braun said so. Now, then, Mr. Foulds said that he saw instances where they actually were loose. His contention is that they constitute a loose member or spline. That is the point.

Mr. TOWNSEND.—Yes.

The COURT.—That is a matter of argument. You have no objection to admitting that he saw some of these straps at various points had worked loose through the coming out of a nail?

The WITNESS.—That might be true. I think that is one advantage of the straps—that, if that nail comes out—

The COURT.—That is a question of argument.  
[225—89]

Mr. TOWNSEND.—Very well, I will accept the suggestion.

The WITNESS.—I would like to testify that these are made with a punch which makes this impression and punches a hole at the same time.

The COURT.—The strap, then, is not pressed sufficient to reach the transverse member. There is a space between the strap and the supporting member. Is that the way it is in practice?

A. I think it is made just as it is in practice. I

(Testimony of Carl F. Braun.)

do not think it would affect the operation of the device if it went down or up.

Mr. FOULDS.—That is all. Plaintiff rests.

Mr. TOWNSEND.—I have certain formal papers to offer on behalf of the defendant.

Defendant offers Braun patent 1,442,784 of date January 16, 1923, for water-cooling tower, this being the so-called second Braun patent and set up in the counterclaim. We stand on claims 1, 2, and 10 as having been infringed by the plaintiff.

(The document was marked Defendant's Exhibit "M.")

I next offered a certified copy of the File Wrapper and contents of this Braun patent, 1,442,784, as Defendant's Exhibit "L." And in connection with that patent and the file wrapper and contents, I offer the references which were cited by the Patent Office during the pendency of the Braun case: Patent to Burhorn, 1,182,635, May 9, 1916, as Defendant's Exhibit "O."

Patent to Burhorn, 1,234,444, July 24, 1917, as Defendant's Exhibit "P."

Patent to B. F. Hart, Jr., No. 902,875, November 3, 1908, as Defendant's Exhibit "Q." [226—90]

Patent to Burhorn, No. 973,163, October 18, 1910, as Defendant's Exhibit "R."

Patent to B. F. Hart, Jr., No. 1,228,207, May 29, 1917, as Defendant's Exhibit "S."

Patent to Schmidt, No. 693,625, February 18, 1902, as Defendant's Exhibit "T."

Your Honor understands that these patents con-

stitute the art cited against this Braun patent, and they were carefully considered by the experts in the Patent Office, and the Braun construction found to be patentable over that art; but these patents, of course, would also be available for consideration of the art with respect to the patents in controversy, both plaintiff's and defendant's.

I also offer in evidence a certified copy of the file-wrapper and contents of the first Braun patent, which is Exhibit "B" of 1920—file-wrapper and contents of 1,334,515, March 23, 1920, as Defendant's Exhibit "U." There are also several patents cited in connection with the prosecution of this first Braun patent—there were several patents referred to and considered by the Patent Office.

The COURT.—We will take a recess now until two o'clock.

(A recess was here taken until two o'clock P. M.)  
[227—91]

#### AFTERNOON SESSION.

Mr. TOWNSEND.—I will proceed to offer the patents in evidence which were cited in connection with the first Braun patent, of 1920, Exhibit "B," the file-wrapper of which was offered as Exhibit "U."

The patent to Stocker, 700,990, May 27, 1902, as Defendant's Exhibit "V."

Patent to Wheeler and Pratt, No. 821,561, May 22, 1906, as Defendant's Exhibit "W."

The patent to Hart, 1,228,207 is already offered. I won't duplicate that; likewise as to the patent to



Schmidt, No. 693,625, already in evidence; likewise the patent of Hart, 902,875.

I next offer patent to Morrison, No. 965,116, July 19, 1910, as Defendant's Exhibit "X."

Patent to Coffee in suit, 1,010,020, is of course in evidence. I cannot offer that.

I offer the patent to Fischer et al., No. 649,573, May 15, 1900, as Defendant's Exhibit "Y."

I next offer the Burhorn patent 1,040,875, October 8, 1912, as Defendant's Exhibit "Z."

Now, the three foreign patents, one French and two British, I will formally offer for the purpose of the record, and supply them later if I find them in my files; I think they are here. I offer the French patent, No. 359,426, as Defendant's Exhibit "AA." When I say "French," it is a patent issued by the Republic of France.

I next offer the British patent to Hebbs, No. 25,449, of November 12, 1905, as Defendant's Exhibit "BB."

A British patent to Pomall, No. 21,711, September 23, 1909, as Defendant's Exhibit "CC." [228—92]

I next offer a certified copy of the Barton H. Coffey patent, file-wrapper and contents, being the patent in suit to plaintiff, No. 1,010,020, November 28, 1911, as Defendant's Exhibit "DD."

I also offer the citations appearing in that patent application file, being the following five patents: Cooper, 140,680, July 8, 1873, as Defendant's Exhibit "EE."



Mills, No. 463,702, November 24, 1891, as Defendant's Exhibit "FF."

Southwick, No. 303,334, August 12, 1884, as Defendant's Exhibit "GG."

Andrews, No. 544,202, August 6, 1894, as Defendant's Exhibit "HH."

Fisher et al., 49,753—

Mr. FOULDS.—You have already offered that as Exhibit "Y."

Mr. TOWNSEND.—That is the same as Exhibit "Y." It need not be duplicated.

I next offer a series of 14 patents illustrative of the state of the art applicable to the Coffey patent in suit. It is possible one of these may be duplicates, but I have them all bound in a volume, and I am offering the whole volume of these 14 patents as one exhibit, Defendant's Exhibit "II."

Mr. FOULDS.—Are these referred to in your answer?

Mr. TOWNSEND.—I will just read them off. The Windhausen patent No. 111,292, of January 24, 1871, as Defendant's Exhibit "II-1." These are to be considered as illustrative of the state of the art, which is permissive without notice. They are not set up for anticipation, as we understand it. I call particular attention to Figs. 9 and 10 of said patent.

Next, as Exhibit "II-2," Hanisch No. 477,755, of June 28, 1892, and call attention to Fig. 5 as another arrangement of [229—93] baffles and deck boards for affecting cooling.

Next the Stocker patent No. 700,990, May 27, 1902,

as Defendant's Exhibit "II-3"; this patent being interesting as showing a trough distribution for the water and the trough dammed at the end to cause the overflow in a manner very common in the art.

Patent to Wheeler et al., 707,042, of August 12, 1902, as Exhibit "II-4." The Court will note the distributing decks shown in Fig. 2, and the patent being interesting as relating to cooling towers, as the inventor says, especially to water-cooling towers used in connection with steam plants operating with a condensing system, and more particularly to the open or nonenclosed type of this class of tower. The tower also shows the use of screens to prevent excessive flowing away of the water.

Next, as Exhibit "II-5," the patent to Halsall, No. 683,933, October 8, 1901, another open type of tower with decks at intervals, the patentee saying on page 1, lines 70 to 79:

"Disposed within the tower at suitable distances apart are a series of gratings 15, the meshes of which are of suitable size to break up and atomize the drops of water showered thereon and which descend in opposition to the ascending current of cold air in the tower."

I should say this is a forced draft tower, not an open-type tower.

To illustrate the principles involved, next is the patent to Ostendorff, 661,192, November 6, 1900, as Defendant's Exhibit "II-6," which is an open type cooling tower, the patentee saying:

“My invention is directed particularly to improvements in means for cooling water by natural aeration and evaporation caused by allowing the water to fall in fine drops or streams through the air.”

Mr. FOULDS.—It used a pan; it does not use slats at all. [230—94]

Mr. TOWNSEND.—It used a series of pans.

Next is Exhibit “II-7,” another patent to Ostendorff, No. 697,160, of April 8, 1902, and refers to this as a water-cooling tower and states the object very much as before.

Next is Exhibit “II-8,” Ostendorff patent 836,702, of November 27, 1906, water-cooling apparatus, and he makes reference to his former patent 661,192, he saying: “My improvements being directed particularly to certain changes in the distributing pans employed in connection with the tower of the water-cooler.”

Next, as “II-9,” Burhorn patent 772,780, of October 18, 1904, where the drip bars are secured at the frame ends.

Mr. FOULDS.—There are no drip bars in that. I took out that patent. There are no drip bars there. That is a pan.

Mr. TOWNSEND.—That is true, although I see in Fig. 3 the longitudinal groove on the under side.

Mr. FOULDS.—There were no slats in that.

Mr. TOWNSEND.—That is quite true, but I don't think that is a distinction of great importance, is it, Mr. Foulds?

Mr. FOULDS.—It seems to me that a pan covered the entire interior of the deck, perforated pan, is quite different from the structure we have here.

Mr. TOWNSEND.—The Court understands this as showing the state of the art, various exemplifications by which certain ideas are embodied to carry it out.

The next is “II-10,” Burhorn patent 961,100, dated June 14, 1910, cooling tower. I suppose that might be considered an open type.

Mr. FOULDS.—These were shallow pans.

Mr. TOWNSEND.—Next as Defendants Exhibit “II-11,” Burhorn No. 1,014,371 of January 9, 1912, applied for on November 26, 1910, illustrating another idea of Mr. Burhorn. Burhorn apparently [231—95] was quite a prolific inventor, and Mr. Coffey, the patentee and the expert for plaintiff, makes frequent reference in the depositions to his indebtedness to Burhorn. I see I have already given the patent to Fisher, 649,573, so I will pass over that, but in that patent to Fisher I want to call particular attention to Fig. 6, this being dated May 15, 1900, showing that the water dropped from one slatted deck to another, and the slats being staggered, and also interesting as Fisher shows a spline for holding certain members, these splines being more particularly shown in Fig. 4.

The next, Exhibit “II-12,” is a patent to Burhorn, No. 1,092,334, dated April 7, 1914, and call particular attention to Fig. 5, slats, quite similar to the slats of the Coffey patent in suit. It shows also splines 29. Fig. 5 illustrates the structure and



what is interesting is to note the following from the specification of Burhorn on page 2:

“And the slats being separated by splines 29 set between the slats 27, 27. In this form of deck I preferably provide a longitudinal channel 30 in the under side of the slats 27, whereby the water will be caused to fall from the sides of the slats instead of seeking the center, thus accomplishing the desired division of the water into fine spray.”

So that there will be no misunderstanding, your Honor will recall this, I only put this in for this purpose—it cannot be used for anticipation; it is used for the purpose, rather, of explaining the use of splines in this art. The patent was applied for shortly after the plaintiff's patent was issued. For some unaccountable reason which is not apparent from the face of this patent—I am curious to know whether there was any interference—maybe Mr. Foulds can enlighten us—between Coffey and Burhorn. [232—96]

Mr. FOULDS.—There was none.

Mr. TOWNSEND.—It was applied for a few months after Coffey, but it shows almost the identical construction of Coffey, with the splines and the housing, and it is interesting as showing what splines meant to two men who were very closely associated about that time. I have no inference to draw or to offer, and I merely put this in on account of the peculiar verbiage that we find there.

Next, as “II-13,” the Alberger patent No. 1,098,004, dated May 26, 1914, filed October 1, 1909. This



is a closed type of tower, and I understand is the type of tower that Alberger Company was making, and which Mr. Braun handled prior to his purchasing these two towers from the Cooling Tower Company to put up at the Shell Refinery. It is interesting as connecting up a practical machine that was well known on the market with a patent on the same.

We have made reference to a cut which I believe is called Cut 14 in the catalog of plaintiff. For the convenience of the Court, I have had a photostatic enlargement made of that cut, and I will offer that as Defendant's Exhibit "JJ."

Mr. TOWNSEND.—Mr. Foulds, will you admit that is a copy of a letter that was sent to the Standard Oil Company by the plaintiff?

Mr. FOULDS.—I would be willing to admit it but I have not the original letter here.

Mr. TOWNSEND.—The answer to the counterclaim admits that parts of the letter were correct and I had not noticed the whole letter was copied so the admission covers the whole letter.

The COURT.—Referring to the letter set out in the answer?

Mr. TOWNSEND.—It is set out in the answer on pages 14 and [233—97] 15, from the Cooling Tower Company to the Standard Oil Company, and in their answer to the counterclaim plaintiff admits that on or about July 11, 1918, it wrote a letter to the Standard Oil Company, a part of which is quoted substantially in said paragraph. The full letter is quoted, so that would cover it. Now, there

is one question in regard to one letter passing between Mr. Foulds, representing the plaintiff, and myself representing the defendant, that I had no previous knowledge of until I heard it mentioned in the depositions taken in New York last June, and having seen the copy that Mr. Foulds introduced in evidence here yesterday; the letter purports to have been written by Mr. Foulds to me on September 4, 1918, in reply to a letter which I addressed to Mr. Foulds' firm on August 28, 1918. I have no objection to that letter being considered, if Mr. Foulds wants to offer it, as a letter of such a date; I have never received it, and not only did I not recollect the letter when I saw it, but I had diligent search of my files made, and as long as a year ago in correspondence with the Cooling Tower Company's representative, Mr. Fleming, in Los Angeles, took him to task for certain things which we will go into later. I called attention to the fact that I had never received a reply to my letter of August 28th. I merely make that explanation.

Mr. FOULDS.—The letter was offered in evidence, and it was stipulated on the record in New York that if Mr. Townsend were called as a witness he would testify that no answer was received to that letter.

The COURT.—Was a copy of the letter put in evidence?

Mr. FOULDS.—A carbon copy of the letter is here before the Court.

The COURT.—And it was identified as a letter

that was mailed [234—98] by you or your office to Mr. Townsend?

Mr. FOULDS.—Yes.

The COURT.—It will be admitted.

Mr. FOULDS.—I refer to the letter, Plaintiff's Exhibit 22, dated September 4, 1918.

Mr. TOWNSEND.—While on the subject, Mr. Foulds, it might shorten matters, if agreeable to you, to offer copies of some letters as between myself and Mr. Fleming, and the reply of his counsel to me.

Mr. FOULDS.—I do not dispute those letters, except that Mr. Fleming had no authority to represent us in any way. He was our selling representative here, just as Mr. Braun was our selling representative here before him. He has no authority except to try to place our towers on the Pacific Coast.

The COURT.—What do the letters amount to?

Mr. TOWNSEND.—This is in connection with our counterclaim. I may be a trifle premature in offering it.

The COURT.—That part of it is all right.

Mr. TOWNSEND.—But I am trying to put all of these documents in at the same time. On October 19, 1922, I addressed a letter to Mr. N. O. Fleming, 261 South Middleton Street, Huntington Park, California, on behalf of Mr. Braun, calling attention to certain misrepresentations that had come to our attention that he, as the representative of the Cooling Tower Company, had been making to our customers, and causing us serious damage. Enclosed with that letter were copies of correspondence that I had

had with the Cooling Tower Company and Mr. Foulds in July and August, 1918, and I specified five different kinds of wrongs that they committed, and that this matter had been taken up many years before with the principals, and they had seen fit to lay off for several years, and we heard nothing from them until quite [235—99] recently, and I quoted those—

Mr. FOULDS.—It is understood I object to these.

The COURT.—Yes, I want to know what it was, so that I can pass on the objection.

Mr. TOWNSEND.—I do not want to use any improper tactics to get a letter before the Court.

The COURT.—It is entirely proper to state the contents of the instrument; I cannot pass on it without knowing what it is.

Mr. TOWNSEND.—I think this will show the point. I called attention that they had not seen fit to bring suit or try out any question of infringement, if they honestly thought infringement existed, and that Mr. Braun had borne these misstatements as long as he could, and if there was not complete retraction we would take action ourselves; my letter was written on October 19, 1922, and I received shortly after that a letter written on October 23, 1922, by Frederick W. Lake, an attorney of Los Angeles, on behalf of Mr. Fleming, stating the matter would receive his immediate attention.

The COURT.—Is that all there is to it?

Mr. TOWNSEND.—There is a little more to it. The letter says:



“Mr. N. O. Fleming has consulted me with reference to the matter set forth in your communication of October 19, 1922, relative to the controversy that has arisen in connection with the construction of certain cooling towers. Inasmuch as the Cooling Tower Company, of New York City, would be the principal defendant in interest in any litigation instituted on behalf of your client, and inasmuch as all patents, files and other data are in the immediate possession of that corporation, I have advised Mr. Fleming to forward your communication, with the correspondence enclosed therein, to the Cooling Tower Company, at New York, for attention and reply.

“I believe I can assure you that the matter will be given [236—100] immediate attention, and that you will hear from the corporation in due course. Inasmuch as the corporation will be unable to receive and reply to your communication within the five-day period required by you, however, I request that any litigation at the instance of your client be delayed until the corporation has had a reasonable opportunity to take the matter up with you.”

On October 25 I acknowledged receipt of that letter, in which I stated:

“I have your letter of the 23d instant, and have referred same to my client for further instructions. Any action we might take in the immediate future while awaiting your advices from the Cooling Tower Company would, of



course, necessarily depend, in a large part on the conduct of Mr. Fleming with relation to my client's business.''

The next we got was a suit filed here in about a month.

The COURT.—Where is this material, Mr. Townsend?

Mr. TOWNSEND.—It is material on the line of the counterclaim, the conduct, and also on the matter of laches.

The COURT.—Does it add anything to your claim of delay or laches, or to your right to reparation for wrong done you because you write a letter about it? How does the writing of a letter add to or detract in any way from your position?

Mr. TOWNSEND.—Only in this, that it is an indication that the only reason they acted and brought this suit was to save their faces, after years of delay.

The COURT.—I do not think the reasons for the bringing of the suit are in the least material. Do you think they are?

Mr. TOWNSEND.—But this correspondence is part and parcel of the correspondence, part of which was introduced in New York by them; they introduced the letters, themselves, that passed between Mr. Foulds and myself, and now this is a continuation [237—101] of the same correspondence.

The COURT.—All right, I will let it in. I do not think it amounts to anything on earth.

Mr. FOULDS.—It is objected to as immaterial.

The COURT.—If it turns out as immaterial I will strike it out. I am letting it in largely on the theory that it cannot hurt you.

(The document was marked Defendant's Exhibit "KK.")

Mr. TOWNSEND.—I offer the assignment of the two patents which are in suit from Mr. Braun to the corporation.

Mr. FOULDS.—Unrecorded assignments?

Mr. TOWNSEND.—Yes.

Mr. FOULDS.—Dated February 10, 1923?

Mr. TOWNSEND.—Yes. Prior to February 10, 1923, the defendant corporation did not own either of these patents.

Mr. FOULDS.—That is what I mean.

Mr. TOWNSEND.—I offer the assignment from Braun to the corporation dated February 10, 1923, and ask that it be marked Defendant's Exhibit "LL."

(The document was marked Defendant's Exhibit "LL.")

Now, I want to make a brief statement in regard to the first Braun patent, that has been included in this suit. At the time that the suit was brought, from the information that I had before me I thought that the plaintiff had infringed that first patent. They may have, but I have not the proof of it; so while the patent is before you, and in order that our position might not be misunderstood, the defendant offered to withdraw the patent after plaintiff had actually taken proofs in New York, or leave the patent stand. We will not be able to

offer any proof of infringement of the first patent, so about all the Court can do would be just to disregard it or find it valid and not infringed, whatever disposition your Honor wishes. Our [238—102] proof in regard to the infringement of the second patent is directed to the matter that I called attention to, Claims 1, 2 and 10. We have not at this time any proof that they have infringed any of the other claims. I make that statement in fairness to counsel and to the Court. My first witness will be Mr. Shattuck.

Mr. FOULDS.—When you say you make no claim of infringement of the first patent, you mean patent 1,334,515?

Mr. TOWNSEND.—Yes, of 1920.

TESTIMONY OF CHARLES H. SHATTUCK,  
FOR DEFENDANT.

CHARLES H. SHATTUCK, called for the defendant, sworn.

Mr. TOWNSEND.—Q. Will you please state your age, residence and occupation?

A. Age, 33; residence, Pasadena; occupation, secretary of C. F. Braun & Co.

Q. How long have you been connected with C. F. Braun & Co., defendant corporation?

A. I went with C. F. Braun & Co., in late 1913 or 1914.

Q. And have been with them continuously since?

A. With the exception of some eighteen months in the army during the war.

Q. Are you an engineer by profession?

(Testimony of Charles H. Shattuck.)

A. I graduated from Stanford University in engineering, and have followed it up to a year or so ago, when I became secretary of the company, and have followed it indirectly since then.

Q. Are you familiar with the construction employed by the Braun Company in the erection of its cooling towers? A. I am.

Q. And particularly with reference to the construction illustrated in the model Exhibit "D," as to panel louvers and supporting them in the tower, and extension of the deck joists, etc.?

A. I am.

Q. I have particular reference to the second Braun patent, 1,442,784. What was your first connection with and knowledge of [239—103] that particular construction I have referred to?

A. That construction went through a process of development some years ago, and I took it up on being discharged from the army, and went in on drafting work under Mr. Braun's instructions to design an improved water tower.

Q. Just what was that work that you first took up and the condition of the work when you came out of the army?

A. It was engineering and drafting work, tower designing and work on our other specialties.

Q. Had any work been done on the design of the particular form here when you returned from the army?

A. As I remember, yes, he had done quite a little sketch work, and preliminary consultation work.



(Testimony of Charles H. Shattuck.)

Q. When was it you came out of the army?

A. I was discharged in March, 1919; the armistice was 1918.

Q. Did you start in immediately on this work with Mr. Braun?

A. I started in picking up the threads of the design work, and I followed out the details.

Q. Can you tell us from the model exactly the character of the work that you did at that time, and what had to be done, and over what period of time that was being done?

A. As I recollect on taking up the work, we were working on a complete wooden tower, endeavoring to make all members of that tower take care of certain stresses and strains, and not be a dead load or not functioning in that respect. It was important to do this owing to the fact that we should get a tower made of wood that would not contain large structural members which would hinder the passage or stop the flow of wind through the tower or windage through the tower; we bore these facts in mind, also economical facts as to cutting down lumber to the minimum, and facilitating field erection, and also the length of lumber, [240—104] using lengths that were most economical to purchase.

Q. Can you give us some idea of the weight in pounds, or tons, or in any way you want to express it, of such towers?

A. As I recollect, these towers carry loads up to—the water alone, 100,000 gallons, would be roughly 800,000 pounds per minute, and distrib-



(Testimony of Charles H. Shattuck.)

uted over the tower from some flume which often times has considerable head. There were numerous loads. Of course, there was a windage load to take into account, and the dead weight of the tower itself, the timber and wood material.

Q. What is the weight of a gallon of water?

A. It is 8.33 pounds, as near as I remember. I have not looked it up for two years.

Q. Now, were you able to solve these problems of strain and stresses and wind velocity?

A. We believe we were able to—we know we were able to solve it in this present design of a cooling tower shown in the exhibit.

Q. Can you mention the members or elements or indicate them, which contribute in your opinion to that desired result?

A. The transverse members and longitudinal members supporting the deck that extended beyond the columns to hold the end of the louver —by employing that transverse member extended beyond the column we were able to get a very rigid structure, and it enabled us to use the louvers to form a truss that braced the whole structure; heretofore the louvers has been merely to prevent water from leaving the towers, but had performed no function in bracing the tower in its entirety.

The COURT.—Where does that word come from, “louver,” in that connection. Is it a common architectural term?

A. I believe “louver” is a common architectural term, such as on the top of a barn, or most any-

(Testimony of Charles H. Shattuck.)

thing that will allow the air to go through. I [241—105] am not familiar with the exact definition.

Mr. TOWNSEND.—Q. To your knowledge, has the plaintiff corporation erected any wooden towers in this district? A. They have.

Q. Where and when?

Mr. FOULDS.—May I cross-examine on that point as to how this witness knows what the plaintiff corporation has done?

Mr. TOWNSEND.—I think we will show that.

The COURT.—If you want to you may do so.

Mr. FOULDS.—Q. What knowledge have you as to the work of the plaintiff?

A. I have witnessed the erection of their towers.

Q. What reason have you to believe that the plaintiff had anything to do with that erection?

A. There is one particular tower that I watched being erected.

Q. I am not questioning the erection of the tower; I am questioning the connection of the plaintiff with that erection. Had you any knowledge as to who erected the tower?

A. I saw the plaintiff's name-plate on the tower. I saw the contract, and the date of the contract on that particular tower.

Q. Have you that contract?

A. I have not that contract.

The COURT.—Q. Did you see the contract in the Cooling Tower Company's office?

(Testimony of Charles H. Shattuck.)

A. No. The contract was in the possession of the owners of the tower.

Mr. FOULDS.—Q. Do you know whether the plaintiff merely sold the parts of the tower and someone else here erected it?

A. To my knowledge the tower was erected by the Cooling Tower Company.

Q. What do you mean by that? Do you mean you believe it?

A. I saw the contract for the tower.

Q. You mean in your opinion the plaintiff erected it. Is that what you mean?

A. My statement was based on the fact that I saw the contract and saw the name-plate on the tower.  
[242—106]

The COURT.—The contract between the owner and the plaintiff? A. Yes.

Q. Did the contract include the work of erecting the tower?

A. I was not allowed to read the contract.

Mr. FOULDS.—You merely saw the cover of the paper containing the contract?

A. He turned the pages over showing your name, and I read the date of the contract.

Q. But you did not read the contents of the paper? A. I did not.

The COURT.—Is there any dispute about?

Mr. FOULDS.—Yes, just as the Shell tower was erected here by Braun; we do not do erection here at all; we do not prosecute any business in this state. Our solicitor, if you will call him that, so-

licits business on his own account. We have the structural work done in New York, and we do not erect in this state.

The COURT.—Do you send out the material fabricated?

Mr. FOULDS.—The structural steel is fabricated, but the wood, I think in every case, originates here in California.

Mr. TOWNSEND.—This is a wooden tower we are talking about, and not a structural steel tower.

Mr. FOULDS.—But we do not do that.

Mr. TOWNSEND.—We will call on the plaintiff to produce that contract which they have with the Pasadena Ice Company.

Mr. FOULDS.—I cannot produce anything on a minute's notice.

The COURT.—Of course, that is not reasonable to expect, that counsel carries around with him the contracts, unless he has some previous notice. To what point is the erection of these towers directed?

Mr. TOWNSEND.—To the point wherein they have appropriated our method of construction of extending the floor joists to give combined strength to the tower, and support and co-operate [243—107] with the louvers as supporting members. I think Mr. Shattuck, if permitted to go a little bit further, will produce photographs and tell when they were taken, and when he saw the tower.

The COURT.—That is not competent now.

Mr. TOWNSEND.—And the name-plate or a



copy of the patent numbers that appear, and the legend that appears on these towers.

The COURT.—Here is a flat denial that they do any such thing, that they construct any towers at all; that all they do is to solicit business and then what—to give license, or what is the nature of it?

Mr. FOULDS.—The transaction is as was in the Braun Case.

Mr. TOWNSEND.—If I may interrupt a minute, this contract that Mr. Shattuck refers to is a contract by the plaintiff Cooling Tower Company and the Pasadena Ice Company, the user. Mr. N. O. Fleming is the representative—I don't know what they want to call him—of the Cooling Tower Company, and as seen from the correspondence Mr. Lake, the attorney, refers the Fleming matter right to the principals in New York. Now, in the Shell case, the contract was between the Cooling Tower Company, or its predecessor, Mitchell-Tappen Co., and Mr. Braun, and the Braun Company's contract was with the Shell Company. So the work of the Shell Company was not the work of the plaintiff. It was Mr. Braun's work. The work with the Pasadena Ice Company, which we complain of, is direct work by contract with the plaintiff. The two cases are not parallel.

Mr. FOULDS.—Might I interrupt you for a minute? In the Braun case, the Shell plant refinery at Martinez, we sent on the contract with the name blank to have Mr. Braun put in there the name of the purchaser.



Mr. TOWNSEND.—We have those contracts; we will produce the contracts, as to what their contents are. [244—108]

The COURT.—Mr. Foulds, what is the plaintiff's method of doing business?

Mr. FOULDS.—We are told by representatives here, or our solicitor, whatever we may call him, he is not our agent, of a prospect, told of the weather conditions, the quantity of water to be cooled, the Government reports as to the barometer, and so on, and we send him a plan which we think will be suitable for the purpose of that company. He sends on the data to us and we send a contract, which may be filled out in his name and may be filled out in the purchaser's name, that is, the user's name, and the man here in California, or the purchaser or customer may get the wood; in other words, we give them the plan for the tower.

The COURT.—In effect, you constitute them a licensee under your patent?

Mr. FOULDS.—That is it.

The COURT.—All right. If you license them, that is, you license the user to contract that tower for his own use, is the company any less an infringer than if it came out and actually constructed the thing?

Mr. FOULDS.—It would depend on how they constructed that tower. If they did put in some tower that was not in accordance with the plans, the company would not be.

The COURT.—If they went ahead and added

something that was not in accordance with the plans, that would be right. I see your point there. It may be sound, Mr. Townsend. In other words, would you not have to show that this tower, wherever it was, was constructed in accordance with the license granted by the plaintiff?

Mr. TOWNSEND.—There is something else to consider in connection with that. If Mr. Foulds is seeking to point out that [245—109] they would not be direct infringers because they had authorized somebody else to do it—

The COURT.—I guess he don't mean that.

Mr. TOWNSEND.—They would be contributory infringers. On the other hand, the fact that the name-plates go on there and that after the work is done—

The COURT.—Supposé I have got a patent, and you are in a remote state, and I send you my plans and specifications and send you my name-plate, with the number of my patent on it, and tell you to go ahead and build and you go ahead and build, and you incorporate features that are not in my patent, that had never been mentioned between you and me, and infringe some other fellow's patent, and then you put my name-plate on it; am I responsible, unless it is shown that the incorporation of these additional features was under my license or sanction?

Mr. TOWNSEND.—I should say not, because the man was acting beyond the scope of his authority. But I think that things have become some-

(Testimony of Charles H. Shattuck.)

what reversed here on the plaintiff's part. If it is shown that there existed a contract between the plaintiff and the Pasadena Ice Company for the erection of a cooling tower, and a cooling tower was erected which infringed, we have the right to indulge in every presumption that an agent acted within the scope of his authority until it is shown otherwise.

(After argument.)

The COURT.—I think I will admit the evidence, and in the event that I decide that the particular installation shown by the extension of these cross-members as a support for the levers is an infringement, I will give the plaintiff an opportunity to make such showing as it may desire. I will let the testimony in.

Mr. TOWNSEND.—Q. Will you state where you saw that tower that was manufactured by the plaintiff and had its name-plate on [246—110] it?

A. It was at the plant of the Pasadena Ice Company, at Pasadena, California.

Q. When did you see that plant, after being erected, or in the course of erection?

A. I noticed it in the course of erection, or watched it being erected, during, to the best of my knowledge, January, February and March of 1923.

Q. What was the date of the contract that you have referred to here?

Mr. FOULDS.—I object to that.

(Testimony of Charles H. Shattuck.)

The COURT.—I will sustain the objection.

Mr. TOWNSEND.—Q. Can you describe the tower as you saw it being erected?

A. The tower consisted of columns similar to the exhibit, with transverse members running across, holding the decks, and extending beyond the columns, supporting the louvers in a manner similar to the exhibit.

Q. Exhibit "D"? A. Yes, Exhibit "D."

Q. Have you any drawings or photographs illustrating the construction as you observed it?

A. I have photographs taken by our office on March 12, 1923, showing various views of this tower at the Pasadena Ice Company.

Q. And do you know whether these photographs are true and correct of what appears therein?

A. They are true to the best of my knowledge.

Q. I understand that you observed that tower on more than one occasion?

A. I had occasion to pass there sometimes three or four times a week, and I was particularly interested in it, as from the time they put up the columns and started the transverse members, I called it to Mr. Braun's attention that apparently there was an infringement there.

Q. Did Mr. Braun see the tower to your knowledge?

A. To my knowledge he saw the tower from a distance. [247—111]

Q. Did you and he together at any time take occasion to inspect it?



(Testimony of Charles H. Shattuck.)

A. We did not inspect it together, no.

Q. Now, can you tell what the patent numbers were on the name-plate that you referred to? Did you make a note of it?

A. The patent numbers on the back of these photographs which I made notes of and put on on my return to the office the day I climbed on the tower.

Q. And these numbers are as appear on the back of the photographs?

A. These numbers appear on the backs of some five photographs.

The COURT.—Q. These patent numbers were on the name-plate?

A. These were on the name-plate.

Q. And the name-plate was the name-plate of the Cooling Tower Company? A. Yes.

The COURT.—Are these the numbers of the patents owned by your Company?

Mr. FOULDS.—Yes. That seems to be a copy of the name-plate that we use.

Mr. TOWNSEND.—In that Pasadena Ice Company tower, were the uprights and horizontals, louvers, all of wood or otherwise?

A. They were all of wood.

Q. Were the transverse deck-supporting members which extend beyond the vertical posts also of wood? A. They were of wood.

Q. Were they in one continuous piece, or a series of different pieces?



(Testimony of Charles H. Shattuck.)

A. One continuous piece.

Q. Are you able to tell what the action of those extensions of the deck supports beyond the vertical posts with the louvers would be? Would it be the same or different from the action appearing in the Braun tower?

A. The action, I believe, would be the same as in the Braun tower, to the best of my knowledge. I have not analyzed it.

Q. Would it be the same or different from the action where [248—112] the louvers would be supported as for instance in the model Exhibit "G," or the other familiar construction employed by the plaintiff and illustrated in its catalog?

Mr. FOULDS.—I object to the question on the ground that it is indefinite. I don't understand what counsel means by the action.

The COURT.—I do not, either. You had better reframe the question so as to indicate what you mean.

Mr. TOWNSEND.—Q. State whether or not the construction of extended continuous one-piece joists supports in the Pasadena plant in co-operation and coaction with the louvers in that plant would in any way contribute to or detract from the strength of that tower at the Pasadena plant?

A. It would contribute in the same manner as the construction of the panels and transverse members in the Braun tower.

Q. Contrast that structure of the Pasadena ice plant in those features with the structure of the

(Testimony of Charles H. Shattuck.)

plaintiff as represented by Exhibit "G," or its catalog, where the cross-joists are not extended beyond the supporting columns and the louvers are supported otherwise?

A. I do not quite understand your question.

Q. I mean for you to contrast, if you can, or will, the construction of the Pasadena Ice Plant and the common and ordinary construction of the plaintiff represented in Exhibit "G" or in its catalog.

A. Do you mean to give the difference in the Exhibit "G" and the tower as I saw it?

Q. If there is a difference, yes.

Mr. FOULDS.—I object to that on the ground that Exhibit "G" is not an exact but merely a general illustrative model; it does not purport to be our exact construction.

The COURT.—What counsel is driving at is the same thing [249—113] as Mr. Braun testified to, and that was to the effect that there was a difference in the ability of the structure to sustain stresses, particularly lateral stresses—I guess only lateral stresses—when the transverse members were extended beyond the louvers put on and when they were not extended beyond.

Mr. TOWNSEND.—Lateral and diagonal as well. That is the point that I have in mind. Mr. Shattuck, will you give us your observation on that?

A. By extending the transverse members outwardly beyond the column and the upper part of the louver being hung from that transverse mem-

(Testimony of Charles H. Shattuck.)

ber and extended down at an angle to the next transverse member close to the column, a substantial truss is formed, which tends to make the tower in its entirety more rigid, both laterally and longitudinally. In a tower similar to one exhibited by Exhibit "G," the transverse members do not extend beyond the column, and the louvers and supporting members are purely a dead load on the tower, holding the louver there for functioning, the only function being to prevent the wind from carrying the water out.

The COURT.—Let me see that. I was not clear at all when Mr. Braun was testifying, even under this construction, supposing these are the lateral stresses—the wind is coming this way—why the longitudinal members would not aid in supporting the lateral stresses or if the strain was horizontal why the lateral members would not aid in supporting the horizontal members. I can't see it yet.

A. I believe it could be shown diagrammatically. I am trying to figure how I could explain it. It is rather difficult to clarify Mr. Braun's remark on that without a technical diagram.

Mr. TOWNSEND.—I believe that I will be able to clear that up if your Honor is in doubt, by Prof. Moser.

The COURT.—Yes, there is a lot of doubt, Mr. Townsend. [250—114]

Mr. TOWNSEND.—It ought to be cleared up, then. I will take the matter up later. We were referring a moment ago to these photographs. I

(Testimony of Charles H. Shattuck.)

will offer these in evidence as Defendant's Exhibit "MM."

The COURT.—They will be admitted on the same understanding that if there is a holding against plaintiff the plaintiff will be permitted to introduce evidence as to whether it was built in accordance with the license; that is, if the holding is this extension of the cross-members and the construction of the louvers upon them constitute an infringement.

Mr. TOWNSEND.—Q. Did you have occasion to make or have made a blue-print illustrating that structure?

A. I directed that sketches be made of this particular structure, and a rough draft made of the tower showing the general location of the transverse horizontal members, columns, and general details.

Q. Did I understand you to say you had a blue-print made of these sketches? A. I have.

Q. Have you satisfied yourself as to the correctness of that?

A. I am satisfied as to the general outline of this blue-print.

Mr. TOWNSEND.—I will offer this blue-print in evidence with the same understanding, and ask that it be marked Defendant's Exhibit "NN."

Mr. FOULDS.—I object unless it is merely introduced for illustrative purposes. I understand the witness to say that that merely shows generally or he is satisfied that generally shows the construction. I don't know how nearly exact that is.



(Testimony of Charles H. Shattuck.)

Mr. TOWNSEND.—It is not offered as a cooling tower drawing, but a drawing that Mr. Shattuck had made.

The COURT.—It is illustrative of the construction that he saw in this Pasadena tower. Is that correct?

A. Yes, omitting size of lumber and size of patent details. [251—115]

Q. Did you take the measurements on the tower?

A. Yes, the measurements were taken as shown on the blue-print.

Mr. FOULDS.—Q. What are these diagonal lines that are shown there; are they cross-braces?

A. They were labeled "tie rods."

Q. Are they only on one panel, or on both panels?

A. I don't quite understand what you mean by "one panel."

Q. This appears to be a panel and this appears to be a panel, indicating sections on the side of the central supporting columns.

A. This is one end of the tie rod. Four sections are shown, and the tie rods were in as shown there.

Mr. TOWNSEND.—Q. Will you kindly mark the vertical columns with a red A? A. Yes.

Q. And the transverse continuous deck-supporting members B? A. Yes.

Q. Will you mark the extensions, if there are such, of these continuous members B beyond the vertical posts A by the letter B-1?

A. Yes.

Q. And mark the louvers C? A. Yes.



(Testimony of Charles H. Shattuck.)

Q. Did you observe in that construction the character of deck slats, and whether they used splines or not?

A. The splines are shown in the upper corner.

Q. They are shown in detail in the upper left-hand corner? A. Yes.

Q. Were these splines fastened, or were they free?

A. To the best of my knowledge they were free. The tower had water on it at the time and I did not crawl inside to observe the slats.

Q. At the top is the detail of the distributor decking? A. Yes.

Q. And this is the detail, A, of what you call the drip deck? A. Yes.

Q. Was there any intermediate distributor deck?

A. No. [252—116]

Mr. TOWNSEND.—That is all.

Cross-examination.

Mr. FOULDS.—Q. You stated that to the best of your belief these splines were free. Did you try them at all? A. No.

Q. What did you mean by saying that?

A. I couldn't see any nails in there.

Q. Could you see nails down there?

A. Possibly on the end.

Q. Why did you volunteer that statement that to the best of your knowledge these splines were free?

A. Because I did not see nails.

(Testimony of Charles H. Shattuck.)

The COURT.—He did not volunteer it. I asked him.

Mr. FOULDS.—He should have said no, he didn't know. He said to the best of his belief they were free. I submit that is a volunteer statement without any knowledge at all. As a matter of fact, you had no foundation whatever for making that statement, did you?

A. I did not see any nails.

Mr. TOWNSEND.—Do you contend, Mr. Foulds, that they were nailed?

Mr. FOULDS.—No, but I merely wanted to show that the witness was anxious to go the limit in proving what he thinks ought to be proved.

The COURT.—I am not going to try this case on any such lines as that, Mr. Foulds.

Mr. FOULDS.—Q. Did you see the Shell Company tower in 1915? A. Yes.

Q. Do you recall the extensions of the deck members beyond the supporting columns?

A. I do not understand that question.

Mr. FOULDS.—Read the question.

A. No.

Q. There were horizontal frame members at each deck, were there not? A. Yes. [253—117]

Q. And at the point where these horizontal frame members joined the column there was a plate to which the horizontal members were attached, wasn't there?

A. I would have to look at the drawing to refresh my memory on that.

(Testimony of Charles H. Shattuck.)

Q. You may look at them. I show you the blue-print marked Exhibit 51.

Mr. TOWNSEND.—What tower are you speaking of?

Mr. FOULDS.—I am talking of the Shell tower erected by the defendant for the plaintiff in 1915.

Mr. TOWNSEND.—I don't know as this is cross-examination.

The COURT.—I think this is clearly cross-examination, Mr. Townsend.

Mr. TOWNSEND.—On the Shell tower?

The COURT.—Yes. Your whole examination was based on the theory that the extension of these cross-members is an infringement. Now, counsel has a right to ask him if it was not used on the structure built under a license from the plaintiff.

Mr. TOWNSEND.—I withdraw my objection.

Mr. FOULDS.—Q. Isn't this plate which I call to your attention at the end of the horizontal support of the deck?

A. That apparently is a small plate riveted to the column.

Q. It is riveted to the column, and riveted on one side to the extension of the deck and the other side to the deck, isn't it?

Mr. TOWNSEND.—I object to what you are calling an extension of the deck.

The COURT.—Overruled.

A. It is apparently riveted to this member, here.

Mr. FOULDS.—Will you mark that horizontal extension "X"? A. Yes.

(Testimony of Charles H. Shattuck.)

Q. The part that you have marked "X" on this sheet 109 is in substantial line with the horizontal deck member, isn't it? [254—118]

A. I do not see any deck member on here.

Q. Do you see the plate to which the deck member is attached?

A. I cannot certify that is the plate.

Q. Do you find a plate there that is apparently for a deck member?

Mr. TOWNSEND.—I think we ought to have the specifications, your Honor. This is bound to call for more or less of a conjecture, and might inadvertently lead to serious mistake.

Mr. FOULDS.—He knows perfectly what this is.

The COURT.—If he cannot read the plan without the specifications he can say so.

A. No, I do not.

Mr. FOULDS.—Q. What is this member that I now point out to you?

A. Two angles, back to back.

Q. Will you mark this angle "Y," the one to which you have referred? A. Yes.

Q. The other vertical member is another view of "Y," isn't it? A. Yes.

Q. Will you mark that "Y-1"? A. Yes.

Q. To the member which you have marked "Y" and "Y-1," you find a plate attached, do you not?

A. Yes, riveted.

Q. Will you mark that plate "W"? A. Yes.

Q. What would that plate "W" support?

A. I could not tell from this detail.

(Testimony of Charles H. Shattuck.)

Q. Do you see anything supported by that plate "W"? A. No.

Q. What is the member "X"?

A. An angle.

Q. By an angle, you mean an angle iron?

A. An angle iron.

Q. And that extends from where to where?

A. It extends from this point to this point.

Q. What do you mean by "from this point to this point"? Will you call it by name, so that we can understand it?

A. From this angle to this plate. [255—119]

Q. You mean it extends from the plate "W" to the upright column "Y," to another column to which you will please affix the letter "V"?

A. Provided these are columns. I cannot say off-hand whether they are columns, or not.

Q. I call your attention to the legend "I. P.," meaning "intermediate post."

A. I see no footing on here to indicate that is a column.

Q. Will you put a letter "V" on the vertical member which is connected to the vertical member "Y" by the horizontal member "X"? A. Yes.

Q. The other view to the left of the member "V" is a view from the other side, is it not?

A. The drawing does not indicate that. I presume it is intended to be that way.

Q. Do you read blue-prints? A. I do.

Q. Don't you know, as a matter of fact, that the "V" is shown from two views on that drawing?



(Testimony of Charles H. Shattuck.)

A. Well, if you will compare this, there is no indication of the center line on that hole or any of these places here.

Q. Do you believe that these two vertical views are not intended to represent the same member viewed from different sides?

A. I believe they are intended to represent the same member.

Q. Will you put "V-1" on the other view of "V"?

A. Yes.

Q. Now, extending from one end of the member "X" to the vertical column "Y" is an inclined member. What is that?

A. An angle, according to the drawing.

Q. And by "an angle," you mean a strip of angle iron?

A. A strip of angle iron.

Q. Will you put the letter "T" on that angle iron extending diagonally from the member "Y" up to the end of the member "X"?

A. It extends from "V" to a plate which has not been designated.

Q. Will you indicate it by "T," the diagonal member?

A. Yes. [256—120]

Q. What does that diagonal member "T" support?

A. It is rather difficult to analyze that just by looking at the drawing.

Q. Don't you know that that supports the louver?

A. As I remember on that particular tower there were slots in the angle supporting the louver, and I do not see any slots in that angle.

(Testimony of Charles H. Shattuck.)

Q. Could you think of anything else that that diagonal angle iron "T" could support except the louver?

A. It probably has a tendency to hold that angle in place.

The COURT.—We will take a recess now until Friday morning at ten o'clock.

(An adjournment was here taken until Friday, November 30, 1923, at ten o'clock A. M.) [257—121]

Friday, November 30, 1923.

Mr. TOWNSEND.—I suggest, Mr. Foulds, that Mr. Braun has given careful study to these blueprints and specifications which Mr. Foulds was kind enough to loan to Mr. Braun over the holiday, and I think if we put Mr. Braun on we will clear up the whole situation with regard to the blueprints.

The COURT.—All right.

Mr. TOWNSEND.—I think that would be the quickest way. Prior to that, your Honor, in accordance with the custom that prevails with regard to patent matters in this court, and particularly also in the Southern District of California, and before Mr. Harry Wright as Special Master, I have had prepared an affidavit of Mr. Moser, explaining some of the technical matters that have arisen in the trial. We only got this thing together late Wednesday, and I have handed Mr. Foulds a copy, and when we are through with Mr. Braun and Mr. Shattuck it will be quite proper

to present Mr. Moser for cross-examination. The affidavit sets forth in careful form the studied views of Mr. Moser on points of mechanics that have arisen, and it seems to be the quickest way to dispose of the matter, and in accordance with our usual practice.

Mr. FOULDS.—If your Honor please, this affidavit has just been handed me at half past ten now. The customary practice is to present it in advance of the hearing, so that counsel can study it and cross-examine. I have had no opportunity to read it over.

The COURT.—Yes, I think you are too late, Mr. Townsend. You will have to put your witness on.

Mr. TOWNSEND.—It was not possible, your Honor, to know that these things were coming up in advance.

The COURT.—Is Mr. Moser here? [258—122]

Mr. TOWNSEND.—He is here.

The COURT.—I will not admit it now.

#### TESTIMONY OF C. F. BRAUN, FOR DEFENDANT (RECALLED).

C. F. BRAUN, recalled for defendant.

Mr. TOWNSEND.—Mr. Braun, have you given thought and study to the several blue-prints of the Shell tower that we were discussing at the adjournment of the session? A. I have.

Q. Are you able to explain what is therein shown?

A. I am.

(Testimony of Carl F. Braun.)

Q. Have you studied those in connection with the specifications that were submitted? A. I have.

Q. Will you please proceed in your own way to explain these drawings with reference to the structure as actually put up at the Shell plant?

A. These drawings are not entirely complete, and they are not to scale, that is, they are distorted so that the drawing does not show clearly to the observer the relative location of all parts.

The COURT.—They purport to be to scale?

Mr. FOULDS.—I think the witness means that the scale is marked on here, and by referring to it you could show the distance, but the members in one place occupy a larger space than on another place on the drawing.

The WITNESS.—That means they are not to scale. For instance, here is a space nearly as long as this on the drawing; this shows 1 foot 3 inches, and this shows 3 feet. It was probably an error of the draftsman. If these members upon which the dimensions are shown have been broken, then the drawing would be proper.

Q. The lengths are marked, anyway?

A. The lengths are marked. In order to show more clearly the structure, I have had prepared a small sketch which is substantially the same as the [259—123] drawing for the louver panel.

Mr. TOWNSEND.—I ask that this sketch referred to by the witness that he had prepared, be marked Defendant's Exhibit "OO."



(Testimony of Carl F. Braun.)

(The sketch was marked Defendant's Exhibit "OO.")

The COURT.—What does that correspond to? This is a drawing of what? This is the plan for the Shell Company installation? A. It is.

Q. Where does that appear on here, on the blue print?

A. I can identify each member of the blue-print as I go along. Will that be satisfactory?

The COURT.—Yes, surely.

Mr. FOULDS.—Might it be noted on the record that the blue-prints referred to by the witness are Exhibit 51?

A. These drawings are not entirely complete, some drawings being referred to which are not here but with the aid of the specifications and my slight memory of the structure, I feel confident that I can describe it with reasonable accuracy.

Referring to drawing No. 116, showing the outlines of the tower, it will be seen that the tower consists essentially of a number of columns supporting on one side decks and on the other side louvers. These columns are of three types, namely, "L. P.," standing presumably for "louver posts," "I. P.," standing presumably for "intermediate posts," and "C. P.," standing presumably for "corner posts." These markings appear on the drawing 116, and on the respective detail drawings of these members.

Taking first drawing No. 59, particularly that portion of the drawing, the "L. P.," the louver



(Testimony of Carl F. Braun.)

posts, the member marked "1" on the detail drawing is a column which I have also marked on the sketch Exhibit "OO" by the figure "1" in a circle. The member marked "11" on drawing 59, and on sketch Exhibit "OO" is [260—124] a vertical spacing member presumably to align in space the various louver brackets. The member marked "12" on drawing 59, and similarly marked on sketch "OO" is a right angle for supporting the louver boards; there are a number of these angles at intervals throughout the height of the tower. The member marked "14" is a tie member between the column 1 and the spacer 11, and is inclined to be horizontal about 15 degrees. Both louver supporting members 12 and tie member 14 are secured at one end to the column 1 by means of a single half-inch rivet, so marked on the sketch "OO," and on the detail drawing, and at the other end to the vertical spacing member 11 by a single half-inch rivet. In order not to confuse my marking with any numbers which may appear on this drawing, I will mark the horizontal member, say "100," both on drawing 59 and Exhibit "OO"; this horizontal member is a right angle attached at one end to the column by single half-inch rivets, and at the other end to the vertical spacing member by a single half-inch rivet, and is drilled with a number of intermediate holes to which are bolted light wooden members, serving as a walk around the tower. Extending from column to column, that is, extending between the columns on the opposite sides of the

(Testimony of Carl F. Braun.)

tower, are deck supports not shown on No. 59, but shown on Exhibit "OO" and marked "101." These deck supports are secured at one end to one of the columns by a single bolt, the hole for which I have marked "102" on sketch Exhibit "OO," and similarly on drawing 59. These transverse deck members are not supported at the same point in the column, as are the louver supports, or 15 degrees to the horizontal tie members marked "14."

The COURT.—They are, therefore, not extensions of those deck-supporting members?

A. They are therefore not an extension of the deck-supporting members. I have shown this clearly [261—125] on the sketch, which shows that the deck-supporting members are attached to the column at a point above the point at which the small, angular appended louver members are attached.

Mr. TOWNSEND.—Q. Is that your recollection of the actual way that the structure was put up?

A. That is my recollection. This is shown on detail 59, where holes 102 are inclinable, the hole for receiving the bolt passing through the angle and the horizontal deck support. I call particular attention to the fact that louver-supporting members 12, a 15 degree to the horizontal member 14, and horizontal walk-supporting member 100 form no part of the structural frame of the tower, but are appended thereto in a manner similar to that of a fire escape on a building, or a shelf upon a

(Testimony of Carl F. Braun.)

pantry wall. Referring to the specifications, I direct particular attention to Fig. 8.

The COURT.—The specifications are not in evidence, are they?

Mr. FOULDS.—No.

Mr. TOWNSEND.—I would like permission to have them admitted for consideration.

The COURT.—Yes, I think they should be in evidence.

Mr. TOWNSEND.—I offer them as Exhibit “PP.”

(The specifications were marked Defendant’s Exhibit “PP.”)

The WITNESS.—These specifications and instructions have been of material assistance to me in understanding the drawings.

Mr. FOULDS.—Is there included with Exhibit “PP” the letter which we sent to you?

Mr. TOWNSEND.—That is the letter I have already put in evidence.

Mr. FOULDS.—I think not.

Mr. TOWNSEND.—There is no objection to its going in if it has not. [262—126]

A. I refer to Fig. 8 of the specifications, marked “Plan view, corner of tower”; this sketch shows a temporary bracing from the vertical column to the appended louver supporting bracket. I read particularly the following paragraph from this specification, this paragraph being entitled, “Temporary bracing”:

“In both steel and wood construction the out-

(Testimony of Carl F. Braun.)

standing parts of the C. P. posts should be accurately set at 45 degrees and held by temporary wood struts before laying the louvers as illustrated in Fig. 8. Put in as many struts as required to take any twist or bend out of the post. Any twist or bend in the I. P. or L. P. posts should be likewise taken out before bolting up. After the louvers are completed the open spaces"—this has no further bearing. I have referred particularly to Fig. 8 to show that the louver-supporting members are not an integral part of the tower structure, and have practically no strength to resist rotation in a direction around the vertical axis of the column.

On drawing 59 is shown another detail which is of the C. P. or corner post, marked "C. P." on plan drawing 116. This detail differs from the "L. P." post detail principally in the fact that it is designed to be attached at an angle of 45 degrees to the columns, as shown on drawing 116. The column in this case sets square with the tower so that it would be impossible to bolt the angle louver supporting members to the column without bending them. They are instead bolted to small plates which I will mark 103; these small rectangular plates are bent at an angle of 45 degrees at approximately their center and are attached to the column at one end by two rivets, and to the louver-supporting member at the other end by a single rivet. The transverse deck-supporting members are bolted directly to the columns in a manner similar to the way in which the transverse [263—127]



(Testimony of Carl F. Braun.)

deck-supporting members are bolted to the L. P. posts. For convenience, I mark the hole for receiving the bolt for the transverse deck-supporting member "102-A," as corresponding to the similar hole marked "102" in the detail of the L. P. post. On drawing 109 is shown a detail of the I. P. or intermediate post which was supplied in two pieces, and is shown on the drawing in two pieces, that is, the portion on the right-hand side of the drawing looking from the side marked "bottom," is actually attached to the part shown on the left-hand side of the drawing. These I. P. or intermediate posts differ in design from the L. P. posts principally in the fact that there are two angles instead of one angle to the main column. As there are two angles, it is impossible or impracticable to bolt directly to the column the louver-supporting members, and these are supported by small plates marked "105" on drawing 109; this plate is riveted to the column by two rivets marked "106," and the louver-supporting members are riveted to the plate by a single half-inch rivet marked "104." The horizontal deck members are bolted to the column through hole 108 above the entire plate, and particularly above the point in the plate at which the louver-supporting members are attached. Plates 107 are riveted to the column and receive at holes 109 longitudinal tie members of the tower, and in holes 110 bolts, or eyes, or some similar device for securing tie rods shown on elevation 2-2 and marked "111."

Q. Elevation 2-2 on drawing 116?



(Testimony of Carl F. Braun.)

A. Yes. Clips marked "112" on drawing 109 are angles riveted to the column with a single clip upon which are set but not attached the deck-supporting members, presumably, I believe, to carry upon the column the weight of the transverse deck members should the single bolt failor become loosened and fall out. In all three types of [264—128] columns there are no deck-supporting members extended beyond the column.

I call particular attention to the fact that the louver-supporting angles and ties are only an inch and a half by three-sixteenths—that is, the legs of the angle are an inch and a half and the thickness of the angle three-sixteenths of an inch. In my previous description of the C. P. posts, drawing 59, I failed to mention the angle members 113 and 114, which, I believe, are spacing members.

Q. Do you care to make any contrast or comparison between the structure therein shown and your own patented structure of extension of members?

The COURT.—That is not necessary, Mr. Townsend.

The WITNESS.—If there are any other details that I could explain to your Honor I will do so.

Mr. TOWNSEND.—That is all with Mr. Braun on this matter.

Cross-examination.

Mr. FOULDS.—Referring to the plate 105, several of those are shown on the column, are they not?

A. Yes.

(Testimony of Carl F. Braun.)

Q. Is what you have called the clip and marked "112" part of this plate 105? A. It is not.

Q. Is it shown on the plate 105? A. It is not.

Q. Is there any line on this plate 105 which indicates the so-called clip? A. There is not.

Q. Then to refer to the figure 105, you cannot indicate any part of the clip 112?

A. I can indicate clip 112 on both elevations.

Q. Will you indicate the clip 112 on the elevation?

A. I will mark it likewise 112.

Q. There appear to be three bolts or rivets shown on this plate 105; is that correct?

A. There are three rivets passing through plate 105. [265—129]

Q. Will you tell us what the upper hole on the left-hand side of this plate is used for?

A. Let us, for convenience, give the rivet a number.

Q. I think it is 104, is it not?

A. It is marked 104.

Q. That is for the louver support?

A. That is used for attaching the louver support.

Q. Now, there is a hole or rivet almost on the same level with this hole 104; what is that used for?

A. There is a hole or rivet not on the same level with the rivet hole 104 which passes through the angle clip 112, the column angle, the plate 105, the other column angle, and another clip 112.

Q. What is the difference in the horizontal level of these two holes, 104 and 112 in inches?

A. It is small.

(Testimony of Carl F. Braun.)

Q. It is a very small fraction of an inch?

A. It is one-half inch.

Q. Between the level of these two holes?

A. Between the horizontal level of the two holes.

Q. What is the whole below this hole 112 used for?

A. It is used for fastening together plate 105 and the column angles, that is, the main vertical column angles.

Q. That is the hole that you have numbered 106, is it not?

A. I have numbered two of these 106; as you wish to differentiate these holes, I now number one of them 106 and 115, which may possibly to some extent affect my previous testimony.

Q. It will be understood that previously where you referred to holes 106 that you indicate now 106 and 115. A. Yes.

Q. And above these holes 106 and 115 there appears to be a hole which you have marked "108."

A. Yes.

Q. That is used for what purpose?

A. For bolting to the vertical column angle and horizontal deck-supporting members.

Q. What is the vertical distance between the planes of the [266—130] point of attachment to the vertical post?

A. I understand your question to mean the vertical distance between the horizontal planes passing through the center line of the hole marked "104" and the corresponding hole marked "108."

(Testimony of Carl F. Braun.)

Q. You understand I am referring to these two holes?

A. I understand. This dimension, as shown by the drawings, is  $2\frac{3}{8}$  inches.

Q. What is the vertical distance between the planes of the horizontal deck supports and the inclined louver supports, referring to the point of attachment to the post? I mean what you have called horizontal tie rods between supporting posts and the upper end of the louver?

The COURT.—I do not believe he called these the horizontal tie rods. They were what you called spacing members.

Mr. FOULDS.—Call them spacing members.

A. Referring to the drawing 59, I believe it will be clearer if we call that No. 14 as shown on the drawing 59.

Q. Then what is the vertical distance between the point of attachment of this No. 14 and the horizontal deck support?

A. This member is attached, not directly to the column, but to the plate at the same point as is the louver-supporting angle, and the difference between the planes is therefore the same, namely,  $2\frac{3}{8}$  inches.

Q. If the No. 14, which you call the spacing member, were shifted  $2\frac{3}{8}$  inches, it would be exactly horizontal with the horizontal deck, and in the same plane, would it not?

The COURT.—It is obvious if they are  $2\frac{3}{8}$  inches apart and are moved  $2\frac{3}{8}$  inches they would be in the same plane.



(Testimony of Carl F. Braun.)

A. It is not obvious that this member would be a horizontal extension of the deck member.

The COURT.—Not necessarily.

A. That is what I understood [267—131] the question to be.

Q. It depends on its angle, of course.

A. If that is the question, I am unable to determine it from the drawing, as it would involve an accurate determination of the angle.

Mr. FOULDS.—Q. It would be approximately, would it not?

A. I am unable to say without determining the angle.

Q. This temporary bracing that you have referred to in connection with the instructions to the erector, Exhibit "PP," is merely used temporarily during the course of erection, and before the louver boards are bolted to the louver supports; isn't that correct?

A. Yes, that is correct.

Q. When the louver boards are bolted to the inclined support, then this temporary bracing is unnecessary, and is taken away?

A. The temporary bracing is removed.

Q. If these holes through the vertical posts were placed close together, it would tend to weaken the posts, wouldn't it?

A. What holes do you refer to?

Q. I refer to the holes through the vertical posts, my inquiry being directed to the question as to whether the slight difference in the horizontal plane

(Testimony of Carl F. Braun.)

of this hole was not solely because by separating the holes they would get the strength of the posts?

A. Well, I believe that the holes are separated because it was desirable to put in two holes.

Q. But, could there be any other reason that you can think of for separating these holes, except to get the strength of the material, not to cut away the material on the same line? A. Yes.

Q. What?

A. To fasten the plates firmly together.

Q. Why couldn't that have been done in the exact plane, except for the weakening effect on the posts?

A. I doubt if the post is wide enough to receive two rivets.

Q. That is the only reason you think of? [268—132]

Mr. TOWNSEND.—Have you anything to add, Mr. Braun, to what you have already said?

A. Otherwise, I can add that the transverse deck-supporting members are attached to the columns by one eye-bolt, and are therefore free to rotate to that point. I would like to introduce a small model to show that feature.

Mr. FOULDS.—Q. The triangle attached at each corner by a single pin is absolutely rigid, is it not?

A. It is.

In order that this model marked Exhibit—

Mr. TOWNSEND.—The little pasteboard model is offered as Defendant's Exhibit "QQ."

(The model was marked Defendant's Exhibit "QQ.")

(Testimony of Carl F. Braun.)

A. In order that this model may be clearly reconciled with the louver posts shown on drawing 59 and on sketch Exhibit "OO," I will give these members the same markings as I gave them on drawing 59, No. 1 being the column, and 11 being the vertical spacing member, 12 being the louver-supporting member, 14 being the 15 degree to the horizontal spacing member, and I will also mark the horizontal deck supports with the figure "101," similar to the marking of the like members on sketch Exhibit "OO."

The COURT.—What office does that which you call the vertical spacing member fulfill?

A. I believe that it is an alignment member for holding these appended louver angles in alignment and properly spaced. These louver angles are quite light, and would not, by themselves, remain in alignment.

Q. Does it contribute anything to the general rigidity of the structure?

A. I do not believe that it does. To answer that question accurately, I would have to analyze it thoroughly with a diagram. The point I wish to bring out particularly with this model is that these transverse deck-supporting members are not secured to either the louver-supporting members or the column in such a manner as to prevent rotation. The louver members are, [269—133] therefore, incapable of adding any strength to the stability of the tower; as the wind blowing against these louvers, particularly on the outside, would have a tendency

(Testimony of Carl F. Braun.)

to rotate the column on its base to the right, these appended louver supports can absolutely in no way whatsoever offer any resistance to that rotating effect; they would rotate as a whole; the stability of this Mitchell-Tappen tower, as shown by these drawings, this sketch Exhibit "OO," and this model must be obtained solely from tie rods, guy wires, or some similar devices tying the columns together, and attached at such angles as to resist rotation of the column in space.

Q. I can see that very clearly in so far as the louver structure on the side in the direction from which the wind comes, but I am unable to see that that would be true as to the louver structure on the other axis.

A. I presume that you are thinking of the end louver on the tower?

Q. Yes.

A. These towers are relatively long with relation to their width and they are by selection installed transversely of the prevailing wind, that is, it is desired that the wind blow across the tower, rather than longitudinally of it, so that more wind will enter the tower. Any bracing, due to the end members, would not add material support to a long tower; they would have to be supported through the tower. As a matter of fact, referring to plan 116, the louver boards are laid upon the inclined supporting bracket marked 12 on drawing 59, which are very light members, which are attached to the end columns only by single half-inch rivets and are



(Testimony of Carl F. Braun.)

in no way extended into or secured to the tower structure in such manner as to prevent rotation of the appended bracket about the vertical axis of the column; that is, a wind blowing in the direction that I indicate by an arrow marked "Wind" would, if the louvers were [270—134] secured firmly to the appended brackets, tend to rotate the brackets about the column. As I have previously stated, these brackets would have practically no resistance, or no substantial resistance to the rotation about that column. On the contrary, in the Braun structure these louver-supporting members are integral with and, in fact, a part of the structural members of the tower which project from the tower structure, and are substantial structural members, and are held from rotation either around the vertical axis of the tower or in the horizontal direction of the axis of the tower.

Mr. FOULDS.—Q. Is there any more rigid structure known to mechanics than a triangle tied at each of the three corners? A. I don't know.

Q. Do you know of any? A. No.

Q. And so long as these three corners hold that triangle must be absolutely rigid, must it not, in the plane of the triangle, and in the Cooling Tower Company plants that you erected at Martinez you have four of these triangles arranged at right angles, haven't you?

A. I do not understand the question.

Q. Triangles at each side and on each end?

A. We have a great many triangles, yes.

(Testimony of Carl F. Braun.)

Q. But they are arranged in each direction?

A. Yes, they are arranged in three directions.

Q. And the series of triangles arranged on each of the four sides of the tower are tied and bolted together by the louver boards running on all four sides of the tower, are they not?

A. Not securely, no.

Q. But they are bolted to those diagonal or inclined louver supports?

A. They are bolted in loose slotted holes.

Q. Is every one of the holes loose?

A. I will examine the drawings to see whether these holes are shown. [271—135]

Q. Referring to these specifications which you are now examining, do you not find that these louver boards are clamped firmly to the louver supports?

A. No. These clamps shown on these specifications are erecting clamps to hold the members together while they are being toe-nailed together; they are removed after that. The bolt holes do not seem to be shown. My memory is that they are bolted in loose slotted holes. These clamps are temporary clamps which are removed after the tower is erected.

Q. The intention of the erector is to have these louver boards firmly secured to the inclined members, is it not?

A. So that the louver boards would not be blown off.

Q. And so that there would be no play between them?

(Testimony of Carl F. Braun.)

A. I should say that they should be reasonably tight.

Mr. FOULDS.—That is all.

Redirect Examination.

Mr. TOWNSEND.—Q. Mr. Braun, you were asked a question in regard to the triangles which I understand are external to the main frame.

A. They are attached to the columns and have no connection with the main frame, whatever; they are light and they are attached in exactly the same manner as a shelf bracket to a wall, or a fire escape to a building, and add absolutely nothing to the structural strength of the tower.

Mr. TOWNSEND.—Do you wish Mr. Shattuck to be recalled to the stand for further cross-examination?

Mr. FOULDS.—Not unless you want to examine him.

Mr. TOWER.—I will proceed with Mr. Braun on another topic, then.

Q. Referring a moment to the Shell job and your coming in contact with the Mitchell-Tappen Company, will you state whether or not you had any correspondence with any other concern in regard to the Shell job before you heard or knew anything of the [272—136] Mitchell-Tappen Co.'s connection with it, or correspondence with the Shell Company?

A. I was first apprised of the Shell Company's need for a cooling tower through a letter from the Alberger Pump & Condenser Company, or the Alberger Condenser Company—the name has been

(Testimony of Carl F. Braun.)

changed, and I don't remember when the name was changed—the Shell Company sent an inquiry to the Alberger Pump & Condenser Company, and the Alberger Pump & Condenser Company mailed the original, I believe, of this letter to us with a letter of their own, in which they told us—

Q. (Intg.) Do not state the contents of this letter. I will just show you the letter and ask you if that is the letter of the Alberger Company and the attached memorandum that you refer to?

A. These are the two letters that I refer to.

Q. You received these in the ordinary course of business?

A. I received these in the ordinary course of business. The letter from the Shell Company to the Alberger Pump & Condenser Company is the original and not a copy, and bears the signature of the purchasing agent of the Shell Company.

Mr. TOWNSEND.—I would offer this Alberger letter in evidence, with the attached Shell letter, as Defendant's Exhibit "RR."

(The document was marked Defendant's Exhibit "RR.")

Q. Had you made any investigation at that time in regard to cooling tower structures—had you inquired of other manufacturers of cooling towers?

A. Yes, I had made considerable investigation.

Q. What company besides the Alberger Company and the Cooling Tower Company had you been in correspondence with?

A. I remember particularly the Stocker Company;



(Testimony of Carl F. Braun.)

I believe [273—137] there were others; I am unable to recollect their names.

Q. I show you a catalog of the Stocker Cooling Tower, Catalog No. 3, copyrighted 1909 by George J. Stocker, St. Louis, Mo., and ask you if that is the catalog and if you know anything about how long you have had it?

A. I received this Stocker catalog in response to my inquiry to Stocker for a cooling tower to fulfill the requirements of the specifications of the Shell Company. I received it approximately April, 1915.

Mr. TOWNSEND.—I offer this catalog in evidence as Defendant's Exhibit "SS."

(The document was marked Defendant's Exhibit "SS.")

The WITNESS.—That is the year in which the Shell Company towers were built.

Q. Following the correspondence between Mr. Foulds and myself in the summer of 1918, did you come in contact with or hear further from the Cooling Tower Company in respect to matters taken up in that correspondence?

A. Not for a long period of time.

Q. What length of time?

A. I believe that was early in 1922 that my attention was called by several of our customers to the fact that Mr. Fleming—

Mr. FOULDS.—I object to conversations with his customers.

The COURT.—Yes, that would not be admissi-

(Testimony of Carl F. Braun.)

ble. I don't see on what theory that would be admissible at all.

Mr. TOWNSEND.—I do not believe that the conversations would be admissible, but I think complaints in general from his customers would be permissible to testify to.

The COURT.—It depends upon the nature of the complaints. You mean complaints that they were being interfered with by the plaintiff, something of that sort? [274—138]

Mr. TOWNSEND.—It would have to be along that line to be admissible.

The COURT.—That is not admissible, his statement of that. It would be pure hearsay. The objection is sustained.

Mr. TOWNSEND.—Might I ask this question and see if it comes within your Honor's ruling: Did you have complaints from your customers as to activities of the Cooling Tower Company?

Mr. FOULDS.—I object to that question.

The COURT.—The objection is sustained.

Mr. TOWNSEND.—Do you know whether you lost your business by reason of the Cooling Tower Company's interference with your business?

Mr. FOULDS.—I object to that question.

The COURT.—Well, I presume, Mr. Townsend, you are expecting to follow that by evidence as to what that interference consisted of. That is, you are, of course, putting the cart before the horse. It is all right if you expect to follow it up, but you cannot establish your case by showing that the de-

(Testimony of Carl F. Braun.)

defendant lost business or failed to get business for some reason assigned by the customer as being interference by the plaintiff, unless you can show there was such interference.

Mr. TOWNSEND.—I appreciate the connecting link that you refer to would be the calling of the customer to testify he had approached him on the subject.

The COURT.—Yes.

Mr. TOWNSEND.—I have been under the impression that in regard to loss of business, the reason assigned for that loss of business was permissible and not within the hearsay rule.

The COURT.—I cannot see how that could be. Supposing I would go to you and say, “Mr. Townsend, I cannot buy your tower, [275—139] because Mr. Foulds told me that your patent is no good, and I will be infringing.” Well, unquestionably, that interference, if it were not justified, would form the basis for a cause of action for damages for loss of sales, but if I merely told you, that is not evidence of the fact. It would be my statement in regard to the fact.

Mr. TOWNSEND.—We have set up a counterclaim in regard to these matters, and I was under the impression we would show the loss of sales and interference with our business, and then it would be incumbent for the plaintiff to show that such was not the case.

The COURT.—That would be all very well, but that isn't what you are offering. You are offering

(Testimony of Carl F. Braun.)

to show now a loss of business which the customer said was due to the action of the plaintiff. Now, unless you can show the action of the plaintiff, the customer's statement would not amount to anything, it would be purely hearsay. If you intend to show as a fact that this business was lost because plaintiff interfered with someone, I will, of course, admit evidence of the loss of business, but if all you expect to show is that the customer said that was the reason, I cannot permit it at all; it would be hearsay.

Mr. TOWNSEND.—It will be impracticable to bring customers from a distance in that matter, and it is a matter on which we have no better evidence to offer at the present time than what I am offering now, so we will not press the matter.

The COURT.—I will sustain the objection.

Mr. TOWNSEND.—Q. Have the annoyances that you complain of arising in 1922 abated in any degree since my letter to Mr. Fleming, which is in evidence, written last October, 1922? [276—140]

A. Yes.

Mr. FOULDS.—I object to the question on the ground that I understand that is along the same lines counsel said he would not press.

The COURT.—No; he apparently knows about it himself. I would think, Mr. Foulds, that if counsel for the defendant wrote a letter to a man who was selling your towers in this territory and that was followed with a communication that that had been sent on to your company, that that would be suffi-



(Testimony of Carl F. Braun.)

cient to give rise to a reasonable inference that that communication from Mr. Townsend to Mr. Fleming was communicated to your company.

Mr. TOWNSEND.—Perhaps Mr. Foulds will admit that he received my letter.

Mr. FOULDS.—I submit that it is altogether too remote.

The COURT.—It may not be very valuable, but I think that goes to the weight of it.

A. I know of no further interference.

Mr. TOWNSEND.—Q. Has there been a cessation of complaints from customers since that time?

A. Yes.

Mr. FOULDS.—I object to that.

Mr. TOWNSEND.—If your Honor please, before I ask any more questions on this subject of damages, I deem it proper to call the Court's attention to certain admissions appearing in the answer to the counterclaim which go far to establish these matters that we were going to touch upon directly. In other words, your Honor notices in our answer and counterclaim we allege certain unlawful acts, certain acts which we claim were unlawful on the part of the plaintiff, resulting in serious damage and injury to Mr. Braun's company and business. The answer to the counterclaim admits the acts but denies the unlawful [277—141] effect of those acts. In other words, they have attempted to plead a pure legal justification and to state a legal conclusion, which is for the Court to *dray*, in the face of the admissions and the pleadings, and if it is

(Testimony of Carl F. Braun.)

worth while I can call attention to those admissions, so that the questions which I will propound now may be clear, because my question is going to be directed as to whether he has suffered any damage as a result of the admitted acts and declarations of the plaintiff.

The COURT.—I read the answer, Mr. Townsend, and I think I have in mind what you say.

Mr. TOWNSEND.—I want to lay the foundation for that question.

Q. Are you able to state what financial damage, if any, your company has suffered by reason of the admitted acts and representations of plaintiff?

Mr. FOULDS.—I object to that, if your Honor please, as calling for a conclusion.

The COURT.—I don't know. Why is it a conclusion?

Mr. FOULDS.—He does not state any basis for it, but merely asks him if he can state generally the damage resulting from certain admitted acts. I submit that is merely a conclusion of the witness. Let him state the facts, and let the Court form the conclusion. The witness should testify to the facts and not to conclusions.

The COURT.—Suppose he had lost such and such a contract, and such and such a contract had been interfered with, etc., couldn't he state generally the sum and substance of those?

Mr. FOULDS.—I think if the question was directed to some [278—142] specific thing that there might be a different condition. This is call-

(Testimony of Carl F. Braun.)

ing for the witness' conclusion on facts not before the Court.

The COURT.—You can cross-examine him on that. I will allow the question.

A. I can in certain instances estimate the amount of damage sustained by us by reason of the interference with the plaintiff.

Mr. TOWNSEND.—Will you go ahead and tell us?

Mr. FOULDS.—I object to the witness' estimate.

The COURT.—Yes, I think it would have to be something more than an estimate, Mr. Townsend. Wouldn't this matter be one that would be properly addressed to the Master in the event an accounting was ordered?

Mr. TOWNSEND.—That is true, but it must be shown to be in excess of \$5,000.

A. I can state approximately the amount.

Mr. FOULDS.—I object to that.

The COURT.—I will allow it. You may answer.

A. In the case of the Standard Oil Company, we had enjoyed a substantial business with the Standard Oil Company up to the time we were approached by the Standard Oil Company and shown a copy of a letter received by the Standard Oil Company from the plaintiff in this case; we had had not only cooling tower business but other business. Following that time we have never received any substantial business from the Standard Oil Company either in cooling towers or other apparatus, with the possible exception of some very small spare parts which

(Testimony of Carl F. Braun.)

they would be obliged to buy from us, being unable to obtain them from others.

The COURT.—I think that is too indefinite, Mr. Townsend. I cannot see that you could base an action for damages on the [279—143] mere fact that he had ceased to deal with you. I apprehend the letter you refer to is the one set up in the answer. A. Yes, that is one of them.

The COURT.—I think Mr. Braun can testify that he sought the cooling tower business, was refused, and the plaintiff's cooling tower was put up in its business it would be more definite.

Mr. TOWNSEND.—Be as definite as you can in these matters, in view of his Honor's suggestion, Mr. Braun.

A. In the case of the Standard Oil Company, I sought their cooling tower business and other business, and have not been successful in securing it. I could estimate the amount of damage by comparison with the volume of business which we have received from, for instance, the Shell Company, a large oil company operating in California, in one year alone, we received from the Shell Company—

Mr. FOULDS.—If your Honor please, I object to that.

The COURT.—Yes, that is too indefinite entirely. The objection is sustained.

Mr. TOWNSEND.—If you know, what towers, if any, have the Standard Oil Company purchased?

A. The Standard Oil refineries are every difficult



(Testimony of Carl F. Braun.)

of access, and I have no knowledge regarding what they have purchased.

Q. Have you any other instances that you can state with more definiteness where you solicited the tower business and plaintiff's tower was taken instead?

Mr. FOULDS.—I object to that on the ground that the answer expressly denies anything except the Standard Oil letter.

Mr. TOWNSEND.—And the Union Oil letter and acts in general.

Mr. FOULDS.—Oh, no, that is absolutely denied, both in the [280—144] answer and in the testimony. Phillips testified positively that he had not written any letters except what you quote in your answer.

Mr. TOWNSEND.—If it is all of record I won't contradict it, but I do not recall that the allegations were so limited or the denial so specific.

The COURT.—Of course, the denial of it, Mr. Foulds, is not evidence of the fact.

Mr. FOULDS.—I understand that this was based on the admission in the answer, and the answer admitted the writing of the letter that you quoted.

Mr. TOWNSEND.—It goes much further.

Mr. FOULDS.—Oh, *not*. We deny everything except the particular letter that is set out.

Mr. TOWNSEND.—I can call your attention to the bottom of page 2 of the counterclaim, where plaintiff says it admits that it has alleged that the alleged towers of the defendant were simulations

(Testimony of Carl F. Braun.)

of the designs and towers of plaintiff and its predecessor, and it admits that it has, in the course of business, alleged that defendant was infringing certain patent rights of the plaintiff, and it alleges that the statements so made by plaintiff were and are true, and it admits and alleges that various users of cooling towers asserted by the defendant to be its customers were the customers of the plaintiff; it admits that it has threatened to institute suits against users of cooling towers and other devices which infringe the patent rights of the plaintiff; admits that on or about the 1st day of July, 1918, it sent a letter to the Union Oil Company, a fragment of which is substantially quoted in said paragraph, but it denies [281—145] that the said Union Oil Company was a customer of defendant, and prays leave to produce the whole of the said letter before this Court; admits that correspondence has taken place. At the bottom of page 4 it admits that on or about July 11, 1918, it wrote a letter to the Standard Oil Company, a part of which is quoted substantially in the said paragraph, and it denies that any statements contained in the said letter were or are false, malicious or untrue; it admits that no suit was brought at the time, that is, during 1918, for the reason that defendant, though requested so to do, refused to give plaintiff information as to its acts, and plaintiff was unable to obtain the definite information relating thereto. This is argument, and I do not want to go into it now, but it merely bears on the question of wrongful doings,

(Testimony of Carl F. Braun.)

threats of wrongful doings, without knowing what the defendant had done,—

The COURT.—I suppose, Mr. Townsend, that even if you established that a man lost business that he otherwise would have gotten through letters written by plaintiff, it would not establish any cause of action under the settled rule of the State of California. The settled rule of the State of California in *Boyson vs. Thorn* has been even inducing another to break a contract is not actionable. Of course, I know that is usually considered contrary to *Allen vs. Flood*, in the House of Lords, but, so far as this action is to follow the rules laid down in the State of California, there is no question about it.

Mr. TOWNSEND.—If this were an action at law that would be probably true, but I think that the usual course on the equity side would be to follow the broad, equitable principles in the federal jurisdiction. I rather think that would be [282—146] governed by the practice in the federal courts. The American Bar Association is striving to eliminate any distinction between the law side and the equity side of the federal court, when it comes to matters of state practice. There are a number of these allegations that are quite general, and I think that it is incumbent upon us to show some of these specific instances, as well.

The COURT.—The objection at the present time goes to the point, as I understand it, that while in a specific instance the defendant might have lost business, you would have to show that it was due to

(Testimony of Carl F. Braun.)

some act of the plaintiff. I will admit it. Go ahead.

Mr. TOWNSEND.—Q. Have you any specific instance such as that spoken of where you had solicited the business and were unable to get it on the basis represented?

A. I have, in the case of the Union Oil Company of California. The Union Oil Company had been purchasers of our towers, and we quoted the Union Oil Company on another cooling tower, and I was informed by the then superintendent of the gas department of the Union Oil Company—

Mr. FOULDS.—I object to that on the ground that it is hearsay and inadmissible, and conversations with somebody else. It is not claimed we were present at the time.

The COURT.—I cannot see, Mr. Townsend, that the mere statement or excuse of reason given by a prospective customer would be binding upon this plaintiff at all, unless you could show, in addition to that, that plaintiff did something, wrote some letter to the Union Oil Company.

Mr. TOWNSEND.—That is, in fact, admitted to be true.

The COURT.—Is it admitted to be true?  
[283—147]

Mr. TOWNSEND.—Yes.

The COURT.—There seems to be a dispute between you.

Mr. TOWNSEND.—I didn't think there was any question but what that letter was written.



(Testimony of Carl F. Braun.)

The COURT.—The Union Oil Company letter is admitted, is it?

Mr. TOWNSEND.—The Union Oil Company and the Standard Oil Company.

The COURT.—Where does that letter occur in your answer?

Mr. TOWNSEND.—Paragraph 17, page 13, and the admission appears in paragraph 5 of page of plaintiff's reply to the counterclaim.

The COURT.—Oh, yes. Is there any question about that, Mr. Foulds?

Mr. FOULDS.—We admit that letter.

Mr. TOWNSEND.—It is in evidence as Exhibit 19. In other words, I think if it is shown that a letter is written to a prospective customer in which it is insisted that the product of this defendant is being constructed in violation of the plaintiff's patent, and the purchaser refuses to deal upon the basis of that, I think that is admissible.

Mr. FOULDS.—Our further objection to this is that the jurisdictional facts are not alleged in this cause of action. This, of course, is simply an action at law. As far as the defendant is concerned there is no equitable ground for relief asked for whatever, and the case stands by itself. The defendant setting up its case does not include the jurisdictional facts, does not allege diversity of citizenship, does not allege the amount involved exclusive of interests and costs is in excess of \$3000. I submit that the court has no [284—148] juris

(Testimony of Carl F. Braun.)

diction of that case under the allegations in the answer.

The COURT.—The rule, it seems to me, is perfectly well settled, that where an action is brought for the infringement of a patent and the *necessity* diversity of citizenship appears from the very complaint itself, that it is unnecessary to allege it in the counterclaim or cross-complaint. It might be probably necessary to allege the jurisdictional amount.

Mr. TOWNSEND.—The jurisdictional amount does appear.

Mr. FOULDS.—The allegation should be that it is \$3000, exclusive of interests and costs.

The COURT.—You would not contend that you would have to allege in so many words that the amount in controversy is in excess of \$3,000, when it is apparent from the face of the cross-complaint it is in excess of \$50,000?

Mr. FOULDS.—The words “exclusive of interests and costs” are not in there.

The COURT.—In any event, I would permit an amendment, but I do not think it is necessary. I overrule the objection.

Mr. FOULDS.—If the cross-complaint were amended, I would want to amend my answer by setting up the statute of limitations. I have assumed that there was no cause of action set forth there.

The COURT.—Was there any motion to strike or other pleadings directed against it?

(Testimony of Carl F. Braun.)

Mr. FOULDS.—No motion was made. I intended to make it at the hearing.

Mr. TOWNSEND.—The rule expressly provides if you desire to test the sufficiency of the defense you must make it at a certain time.

Mr. FOULDS.—I submit the pleadings can be attacked on the [285—149] hearing.

Mr. TOWNSEND.—The jurisdictional facts, we claim, are all set out, and that would be largely a matter of argument.

The COURT.—In your answer to the counterclaim you do not set up the statute of limitations?

Mr. FOULDS.—No, I do not, but if the defendant is permitted to amend the counterclaim, I would.

The COURT.—I do not think the amendment is necessary. In paragraph 16 it is alleged that the amount of lost sales is in excess of \$50,000.

Mr. FOULDS.—Yes.

The COURT.—That is sufficient.

Mr. FOULDS.—I submit that does not comply with the statute, and certainly there is no allegation of diverse citizenship.

The COURT.—No, but I think the rule is well settled—

Mr. FOULDS.—The Court has jurisdiction of a case relating to patents by reason of the statute.

The COURT.—Yes, I know.

Mr. FOULDS.—But the Court would only have jurisdiction of this particular case under the statutory conditions which are not alleged here.

(Testimony of Carl F. Braun.)

The COURT.—No; the trouble with that is, the plaintiff does not rely entirely or alone upon the jurisdiction of this court, but it does allege the diversity of citizenship. It alleges the plaintiff to be a citizen of New York and the defendant a citizen of California. Now, the rule is well settled that where there is a diversity of citizenship alleged in the complaint that it need not be repeated in the cross-complaint where new parties are brought in. The objection is overruled.

Mr. FOULDS.—Exception. [286—150]

A. I was informed by W. R. Cowan, of the Gas Division, that they had purchased a tower upon which we had bid, from the Cooling Tower Company of New York.

The COURT.—Mr. Foulds, under the rules of this court, an amendment setting up the statute of limitations may be permitted. If you desire to set up the statute of limitations I would, of course, permit you to do so.

Mr. FOULDS.—I thank you; I would like to amend my reply by—

The COURT.—Under the practice in this State, all you have to do is to set up in the pleadings the section of the statute on which you rely.

Mr. FOULDS.—I would like to insert in my reply a further defense to the counterclaim that the cause of action did not accrue within four years prior to the commencement of this action.

The COURT.—Does the statute commence to run from the time of the filing of the cross-complaint?



(Testimony of Carl F. Braun.)

Mr. FOULDS.—Filing of the cross-complaint, February 20, 1923.

The COURT.—You can file that afterwards. That is referring to the section of the Code of Civil Procedure No. 343, isn't it?

Mr. FOULDS.—340 and 335 of the Code of Civil Procedure of the State of California.

The COURT.—All right, I will allow it.

A. Mr. Cowan gave me specific reasons for not giving us this contract.

Mr. TOWNSEND.—Q. Did those reasons pertain to any acts or declarations of the plaintiff?

A. They pertained to the [287—151] acts of N. O. Fleming, the representative of the plaintiff.

Mr. FOULDS.—I move to strike out "the representative of the plaintiff," on the ground that Fleming is not the representative of the plaintiff.

The COURT.—He has been connected up here by documents, Mr. Foulds, which were followed by actions, so I think that he is sufficiently connected up with the plaintiff.

Mr. TOWNSEND.—Q. Can you state whether or not the damages you have suffered in consequence of this representation was in excess of \$5000?

Mr. FOULDS.—Object to that as too general.

A. Greatly.

The COURT.—Yes, I think that is too general. I will sustain the objection. A statement of that kind does not help much. I think he ought to state about what the amount of his damage is.

(Testimony of Carl F. Braun.)

Mr. TOWNSEND.—Q. Are you able to state the value of the tower or towers that you would otherwise reasonably have expected to sell the Union Oil Company?

Mr. FOULDS.—I object to that; that is altogether too indefinite.

Mr. TOWNSEND.—He knows what his bids were, and what other towers were put up.

The COURT.—Yes, I think that is all right. I will overrule it. You may answer.

A. I know of two towers sold by the Cooling Tower Company of New York to the Union Oil Company, which, I believe, had the Union Oil Company ordered our towers, would have amounted to about \$15,000.

The COURT.—For both? [288—152]

A. The two together.

Mr. FOULDS.—I move to strike out the answer on the ground there is no proper basis for it.

The COURT.—I do not know why not. What is your point?

Mr. FOULDS.—He says that assuming that he had gotten the order and assuming that certain things might have taken place, the approximate cost would be \$15,000. There are many other things to be considered. It is a mere guess. There is no foundation laid for any such proof.

The COURT.—Yes, but he testified to more than that. He says that the Union Oil Company people told him the reason they did not give him this business was because of the action of Mr. Fleming.

(Testimony of Carl F. Braun.)

The fair inference from that testimony would be that it was along the line of the letter.

Mr. FOULDS.—The letter that we wrote was in 1918; this was something that happened five years later.

The COURT.—Was this this year?

A. No, this was, I estimate, two years ago.

The COURT.—I will overrule the objection.

Mr. TOWNSEND.—Q. That occurred within the last two years, you say? A. Yes.

Q. What was your loss, as near as you can estimate it, on the failure to sell towers valued at \$15,000.

Mr. FOULDS.—The same objection.

The COURT.—The same ruling.

A. \$4,000—in excess of \$4,000.

Q. Now, have there been any other towers that you have failed to secure that you know of?

A. Yes, several.

Q. Under similar circumstances? A. Yes.

Q. Please state the names of those places, or companies, and state the value involved. [289—153]

Mr. FOULDS.—I object to that on the ground that it is certainly altogether too indefinite.

The COURT.—It is altogether too indefinite, Mr. Townsend, unless you can show in some way that the plaintiff influenced these other persons. With the Union Oil Company I think you tied it up definitely enough, that is, subject to the proposition as to whether or not this Court is going to follow *Boyson vs. Thorne* or *Allen vs. Flood*; but

(Testimony of Carl F. Braun.)

in any event you have to show that the plaintiff exercised a sort of influence upon the person that he is now about to name.

Mr. TOWNSEND.—I think that is correct, and that he can show that either by seeing letters, perhaps—I don't know whether he saw them or not—or by some evidentiary matter emanating from Mr. Fleming.

The COURT.—Yes, if you can show that, all right. Now, answer that question. Have you ever seen any letters or evidentiary matter emanating from the plaintiff, from Mr. Fleming, affecting your answer?

A. I have seen no correspondence.

Q. In those cases you have in mind, you would be dependent upon the reasons given you by the customer? A. Yes.

Mr. TOWNSEND.—Does your Honor believe that is not admissible?

The COURT.—No, I do not think that is admissible at all, Mr. Townsend. I think that is pure hearsay.

Mr. TOWNSEND.—I want to keep away from that.

Q. Mr. Braun, in the manufacture of your towers and the sale of them state whether or not it has been your custom to put the date of one or the other of the two patents in suit upon your towers?

A. We have at all times put name-plates on our [290—154] towers, metal name-plates, enamel-covered, bearing the name of the company, the



(Testimony of Carl F. Braun.)

title, "Braun Atmospheric Water Cooling Tower," or "Atmospheric Cooling Tower," and the dates of all patents which we had on cooling towers at the time when the name-plates were attached to the various towers. Furthermore, the words, "Other patents pending," and the address of the company.

Q. Are you able to say that this plate put upon towers since the issuance of the second of the patents in suit has contained the date of that patent, as well as the other patent in suit?

A. It contained the date of the second patent. When the new patent was issued the previous plates were destroyed.

Mr. TOWNSEND.—That is all.

Recross-examination.

Mr. FOULDS.—Q. Have you a copy of that plate that you put on in January of this year, containing the date of this present patent?

A. I have not available here.

Q. How many towers did you put that last plate on? A. Probably 50 towers.

Q. When did you first put the plate on?

A. I believe that the plate bearing two patents was installed in the first tower we built after the issuance of the second patent.

Q. When was that? A. That is of record.

Q. I do not refer to the date of the patent; I refer to the date of the tower.

A. We had towers almost continuously in course of erection. It would be a very short period after the issuance of the patent.

(Testimony of Carl F. Braun.)

Q. You don't remember what tower it was that it was first put on?

A. Not absolutely. I think I would be safe in saying not over three weeks after the issuance of the patent. [291—155]

Q. You think before the end of February of this year?

A. I don't remember the date of issuance of the patent.

Q. It was in January. A. I think so.

Q. You think it was before the end of February?

A. I think so.

Q. You cannot tell the particular one?

A. Not without looking up our records; we built a great many towers.

Q. Prior to that patent you had merely said, "Patents pending," hadn't you?

A. No, we gave the date of the first patent, other patents pending.

Q. On the Shell tower over at Martinez you merely say "Patent Pending," don't you?

A. I don't know what the plate on the Shell tower says.

Q. What was the date of this conversation with some representative of the Union Oil Company, which you have testified to, within the last two years. Can you fix any more definitely than that?

A. No more definitely.

Q. How definitely can you fix it?

A. I would put it at between one year and two

(Testimony of Carl F. Braun.)

years, because I think it was about at least a year past, and it might be two years past.

Q. Can't you fix it in any way more definitely than that?     A. No.

Q. Can you fix the place?

A. Yes, the office of the Union Oil Company.

Q. Where?

A. In the office of W. R. Cowan, in the then named Union Oil Building, Los Angeles.

Q. Do you know whether Mr. Fleming was selling cooling towers at that time?

A. Mr. Cowan informed me that he was.

Q. That is all that you know about his connection with it?

A. And what other people told me, and by the fact that I saw a cooling tower with his name on it.

Q. You don't know whether that was before or afterward? [292—156]

A. Before or after what?

Q. After this talk?

A. Not very well, it is a long time ago.

Q. It made no particular impression on you?

A. Seeing the literature with Mr. Fleming's name on made an impression on me, but to say the exact date when I saw the literature, I could not say.

Q. You knew that you were going to testify about the Union Oil interview to-day, didn't you?

A. No, I did not know that I was going to testify to that.

(Testimony of Carl F. Braun.)

Q. You did not know you were going to be asked about that?    A. No. -

Q. You have been here on the trial of this case since Tuesday morning, haven't you?

A. I have.

Q. And you cannot give us anything more definite about that date?    A. No.

Q. You did not really consider, then, that it was a matter of a great deal of importance, did you?

A. I did not know what matters were going to come up before the Court.

Q. You know that the Cooling Tower Company has very often won out as against you on the merits of its tower, don't you?    A. No.

Q. Don't you know that it does a very much larger business than you do?

A. No, I think we do a larger business than they do.

Q. You know that it advertises very much more extensively than you?

A. No, I do not think so.

Q. What territory does your towers cover?

A. They cover the world.

Q. Have you built any outside of the United States?

A. We have sold designs for towers outside of the United States.

Q. Then you sell your designs, in addition to selling towers?



(Testimony of Carl F. Braun.)

A. We did sell our designs in one case. [293—157]

Q. That is the only case in which your design went out of the country?

A. The only one that I remember of.

Q. Then what did you mean by saying throughout the world?

A. Because this particular place that the designs were used was on the other side of the world.

Q. Where? A. Borneo.

Q. The only tower outside of the United States is the one design you sold to Borneo?

A. No, there are other towers.

Q. Outside of the United States?

A. Outside of the United States.

Q. How long ago were they sold?

A. One of them was sold within the last year.

Q. You have only sold one within the last year?

A. We have sold many towers in the last year.

Q. Outside of the United States?

A. One that I think of right now.

Q. Have you ever sold any towers east of the Mississippi River? A. Not that I remember.

Q. What is the farthest east any of your towers is located?

A. The State of Texas, State of Oklahoma.

Q. Nothing east of Oklahoma?

Q. Nothing east of Oklahoma.

Q. Nothing east of that?

A. Not that I think of now, except in the Republic of Mexico.

(Testimony of Carl F. Braun.)

Q. Do you know of any other cooling tower dealers except yourself and the Cooling Tower Company—atmospheric cooling towers?

A. Yes, I do.

Q. Who?

A. Burhorn—I believe it is called the Edwin Burhorn Company.

Q. Does it come in competition with you?

A. I believe Burhorn sold some towers in California; I am not certain. [294—158]

Q. In competition with you?

A. Yes, I believe in competition with us.

Q. And has Hart?

A. Yes, Hart has endeavored to sell towers in California.

Q. And both Hart and Burhorn have won out in competition with you, haven't they, at times?

A. I believe they have in competition with me.

Q. What other cooling tower companies do you know of, atmospheric cooling towers?

A. J. Symon Flour of Los Angeles.

Q. Does he sell in competition with you?

A. Yes, he sells in competition with us.

Q. He wins out sometimes against you?

A. Possibly.

Q. Were any of these other atmospheric cooling towers mentioned in your conversation with the Union Oil Company? A. No.

Q. You don't remember of mentioning any of them? A. No.

(Testimony of Carl F. Braun.)

Q. Just what was the conversation with the man that represented the Union Oil Company?

A. The conversation was that Mr. Fleming had stated that we were selling the Cooling Tower Company's design.

Q. That is all?

A. And that we had infringed their patent, that the Cooling Tower Company intended to sue us, and that he could not see how they could lose.

Q. He could not see how who could lose, Mr. Fleming or the Union Oil Company man?

A. Mr. Cowan, I am saying now what Mr. Cowan of the Union Oil Company said, as I understand it.

Q. The Union Oil Company man said that he could not see how the Cooling Tower Company could lose in the suit against you?

A. The Union Oil man said Mr. Fleming said that Mr. Fleming could not see how the Cooling Tower Company could lose in the suit against us.

Q. What did you say about that? [295—159]

The COURT.—He probably said, "I don't see how they can win."

A. I don't remember what I said.

Mr. FOULDS.—Q. You don't remember what you said? A. No, I don't remember what I said.

Q. You acquiesced in what he said then, did you?

A. No, I did not acquiesce in what he said.

Q. You don't remember making any reply to what he said?

A. I don't remember what I replied, no.

(Testimony of Carl F. Braun.)

Q. The whole thing made a very slight impression upon you?

A. No, it made a very deep impression.

Q. Yet you cannot remember what you said?

A. No, I cannot recollect what I said.

Q. You can only remember this particular thing that he said? A. I can remember what he said.

Q. How long before that had you sold anything to the Union Oil Company?

A. Probably a very few months.

Q. What had you sold then?

A. We sold quite a quantity of heat exchange apparatus, and I believe some cooling towers.

The COURT.—They evidently did not pay any attention to the letter—their action was not the result of this letter at all. A. I don't know.

Q. You actually sold them cooling towers after they wrote this letter?

A. I only know what they told me about it.

The COURT.—I think that is pretty indefinite, Mr. Townsend. It is very apparent from what the witness says that after this letter was written the Union Oil Company bought cooling towers.

Mr. TOWNSEND.—I think the witness should be given an [296—160] opportunity to explain what the effect of the letter was at that time. That letter was written in 1918, and then a period of four years passed.

The COURT.—It was not a period of four years. He says about one to two years ago they refused to take these two towers, and told him what Mr.



(Testimony of Carl F. Braun.)

Fleming had been telling them, but a few months prior to that time would be certainly a year and a half or two years after this letter was written, that the Union Oil Company did buy cooling towers from Mr. Braun.

Mr. TOWNSEND.—I think he should explain whether he stopped selling immediately after the receipt of that letter, or whether there was an interval of a couple of years when he did not sell, and the moment he began to get them as a customer they were annoyed by Mr. Fleming, and then they ceased doing business with him completely. You see, the Union Oil Company, being a very large concern, they might have had various officials there in charge in 1918, and for a couple of years Mr. Braun lost such business completely, and then nothing being done on the part of the plaintiff, and the field apparently being open again, he resumes relations with them, and immediately these relations are broken off by the act of the plaintiff.

The COURT.—I will let him go ahead. I think Mr. Braun should explain this very indefinite testimony.

Mr. FOULDS.—Q. How many cooling towers did you sell to the Union Oil Company since 1918?

A. I believe there were four.

Q. Where?

A. One was at Oleum, one was at Wilmington, and two at Orcutt.

Mr. TOWNSEND.—You can state at the same

(Testimony of Carl F. Braun.)

time when they [297—161] were sold. Perhaps we can save time if you will tell about the time that those were sold.

A. I think that I described them in the order of their sale, but it is very difficult for me to fix definite dates.

Mr. FOULDS.—Q. You know they were after 1918? A. I think that they were after 1918.

Q. They were sold at different times?

A. They were sold at different times.

Q. Running over a period of how long?

A. Probably two years?

Q. When was the last one?

A. Between a year and two years ago.

Q. Do you know whether they have been in the market for cooling towers since?

A. Yes. I testified that Mr. Cowan had advised me regarding that.

Q. Do you know how many different kinds they had? A. Only by what they told me.

Q. That is all you know about it?

A. That is all I know. I have not had occasion to inspect their plant.

Q. Have you seen the tower that was actually erected within the last year or two by the Union Oil Company? A. At a distance.

Q. How far away? A. Possibly 100 yards.

Q. Where?

A. That is what they called the Richfield absorption plant in the hills near Los Angeles.

(Testimony of Carl F. Braun.)

Further Redirect Examination.

Mr. TOWNSEND.—Q. What was the immediate result of the letter of July 1, 1918, written by the Cooling Tower Company to the Union Oil Company? Did you get the business at that time?

Mr. FOULDS.—I object to that as indefinite.

The COURT.—Overruled.

A. I obtained business subsequent to that time, but I do not [298—162] believe at that immediate time that there were towers under consideration, but I am not certain.

Mr. TOWNSEND.—Q. You cannot tell how long a time elapsed before they did any business with you after the writing of that letter of July 1, 1918?

A. I think it was over a year.

Q. Did you continue your negotiations with the company at that time in 1918, or were negotiations broken off as the result of that letter, that is, as to any business they contemplated?

A. I cannot definitely state the effect of that letter at the time.

Q. Then I gather that your complaint has been in regard to the representations of Mr. Fleming—pardon me if I seem to put it in leading form—

The COURT.—All right.

Mr. TOWNSEND.—Q. (Continuing.) —a year or so ago?

A. Yes. The effect of that was very definite to my mind in the immediate loss of business.

Mr. TOWNSEND.—That is all.

Mr. FOULDS.—That is all.

Mr. TOWNSEND.—I want to call your Honor's attention for a moment to an authoritative definition of a spline. I have Knight's Mechanical Dictionary, and I have had a little figure, in connection with the definition, reproduced on a piece of yellow paper here, with also the definition of "spline," as it appears in the Standard Dictionary, and just for the convenience of the record I am going to ask that this paper be marked Defendant's Exhibit "TT."

(The document was marked Defendant's Exhibit "TT.")

Mr. TOWNSEND.—Now, Mr. Foulds has been good enough to [299—163] suggest that perhaps we can shorten up the case materially if he can begin the cross-examination of Mr. Moser at once, if the affidavit of Mr. Moser is received in evidence subject to your Honor's approval.

The COURT.—Yes, it will be agreeable to me.

Mr. TOWNSEND.—With that affidavit are some little models which are identified by Mr. Moser as Moser Model A, Moser Model B, Moser Model C; Moser Model A being typical of the so-called Hart cooling tower construction, and analogous, very close to the plaintiff's; B being more closely akin to the plaintiff's, where the single bolts secure the parts together, and Moser Model C indicating the plaintiff's structure. The court will observe by manipulation the structural differences, I think. Mr. Charles Moser is submitted for your cross-examination, if you desire, Mr. Foulds.

Mr. FOULDS.—Yes. [300—164]



## TESTIMONY OF CHARLES MOSER, FOR DEFENDANT (CROSS-EXAMINATION).

CHARLES MOSER, cross-examination.

Mr. FOULDS.—Q. In your affidavit you state that you are not entirely satisfied with the Hart disclosure: Is that correct? You speak of the very meager and indistinct disclosure.

A. In the cuts in the catalogue the lines are not as they might be.

Q. You have assumed that the decks of Hart were merely on one pivotal point, haven't you?

A. I have assumed them to be as they are shown to be in the drawings in the patent specifications.

Q. Assuming that they are shown in this blue-print rigidly connected by two rivets, so that the deck supports and the vertical supports are rigid, would that change your opinion?

Mr. TOWNSEND.—May we have a little light on the origin of this blue-print? Is it in evidence?

Mr. FOULDS.—It is an illustrative blue-print. For the record, for your benefit, I will say that I was prepared to put Mr. Hart on the stand, and I was waiting for Mr. Duncan to resume the taking of testimony in New York, and I had to come away on this short notice without taking the deposition to prove his structure. These are the blue-prints of Mr. Hart's tower that I received from Mr. Hart, but I am doing this now as illustrative—I am showing this as not proof of the Hart tower, but as illustrative of the interrogatories.

Mr. TOWNSEND.—Unless this blue-print represents the tower which is proven to have been actually erected, prior to the invention of Mr. Braun, it, of course, is manifestly improper.

Mr. FOULDS.—It is just as proper as your models are.

Mr. TOWNSEND.—Let me know what it illustrates. It either illustrates a structure or illustrates what is already shown. [301—165]

Mr. FOULDS.—It purports to illustrate a Hart tower.

Mr. TOWNSEND.—There is no proof of it.

Mr. FOULDS.—I am asking the witness to assume that the Hart tower, which he says is very meager and indistinct in its disclosure, but upon which he bases his conclusions—I am asking him to assume that that Hart tower is made as shown in this illustrative blue-print.

The COURT.—I will permit it.

Mr. TOWNSEND.—May I make one suggestion. There is a Hart patent that was copending substantially with the Hart catalogue and the Hart patent of 1917 is the patent which Mr. Moser has assumed to be the structure attempted to be illustrated in that very poor cut of the Hart Catalogue No. 15.

Mr. FOULDS.—He has gone beyond that.

The COURT.—He says that the Hart, so far as he can tell from the construction in the Hart catalogue, is substantially identical with the patent of Hart of May 29, 1917.

(Testimony of Charles Moser.)

Mr. TOWNSEND.—Yes, that is what I wanted the Court to appreciate.

A. Yes, these lines are indistinct; you cannot see from that drawing that it is; it appears to be, as far as you can make out from this. That is all I can say.

Mr. FOULDS.—That is not my question, Professor.

A. I understand your question perfectly.

A. I object to the form of the question. He is suggesting that I answer something about rigidity, which he specifies here.

The COURT.—That is hardly an answer, assuming what the question embodies.

A. He asks me if it is attached rigidly. It is not attached rigidly.

Q. Assuming that the blue-print shows that it is.  
[302—166]

A. If you change your question to ask what I think about the drawing as shown on the blue-print—

Mr. FOULDS.—I want you to answer the question that I am asking, and not your own question.

The COURT.—I think the witness has answered you, Mr. Foulds, saying that your question assumes the blue-print shows a rigid fastening when it does not.

Mr. FOULDS.—Assuming that the horizontal support for the deck and the horizontal support for the top of the louver were rigidly secured to the vertical posts, would that change your opinion?

(Testimony of Charles Moser.)

A. Well, I would have to have some basis for that assumption.

The COURT.—He has a right to ask you what would be the fact if what he assumes is true.

A. Yes.

Mr. FOULDS.—Q. That would change your opinion?

A. That would change my opinion.

Q. Then if you found the horizontal deck support and the adjacent horizontal louver support at the top of the louver rigidly secured in a straight line, you would have the mechanical equivalent of the Braun structure, would you not?

Mr. TOWNSEND.—I object to that. It is for the Court, I think, to determine from the evidence whether it is the mechanical equivalent.

The COURT.—Oh, no. Professor Moser is an expert; he has a right to have an opinion on a thing like that. That is what experts are for.

A. The only way I could answer is, if the connection at the post involving the two pieces you name is equivalent in strength to that of the solid piece, then, of course, it would be identical in its principal. [303—167]

Mr. FOULDS.—Q. Then if a bar is divided and jointed rigidly end to end at a divided point, it is the mechanical equivalent of an undivided bar, isn't it?

A. Can't we use some other word besides rigidly?

Q. I mean unbending connection.



(Testimony of Charles Moser.)

A. An unbending connection, that involves the whole stress situation.

Q. That is what I intended to use.

The COURT.—The lack of rigidity is due to the fact that there is a play on the single fastening as a pivot—that is what it is due to—what you mean is if both of these were fastened rigidly would it be the mechanical equivalent of a continuous piece?

A. It would be a question of degree of rigidity; that is a thing that I rather hung up on there.

Mr. FOULDS.—Q. Then the only distinction which you find between the plaintiff's structure and the defendant's is the degree of rigidity at the post?

A. The vertical post, very pronounced degree.

Q. That is the only mechanical difference you find, isn't it? A. Yes.

Q. You say in your affidavit that these triangles or trusses add no strength whatever to the vertical post: Is that correct?

A. I have not used the word "truss."

Q. No, I used the word truss; what would you call that triangular framework?

A. That is a triangle, it is not a truss, but I would not make such a sweeping remark. This is a local truss.

Q. I refer to the truss-frames there. A. Yes.

Q. Does that truss add anything to the bending strength of the vertical posts?

A. None whatever.

Q. That vertical post would bend just as readily without that as with it? A. Yes. [304—168]

(Testimony of Charles Moser.)

Q. Could you have this supported by these two arms of the triangle and bend just as readily as this?

A. Of course, everything that is placed on there adds some slight degree of rigidity, but substantially those louvers, the triangle there, add nothing to the strength of the post.

Q. Assuming that the bracket is positioned as I am holding it now, with the short arm vertical, would this horizontal arm support no more strength than if the hypotenuse or the inclined arm were absent?

A. Do you refer to this horizontal arm?

Q. I am holding Moser B with the point of the triangle downward, and what you have used as a vertical post horizontal, and I am asking you whether that form does not give strength to the post that is now horizontal?

A. No, it does not.

Q. Then the end of this post now held horizontal would not support any greater weight by reason of the supporting inclined arm: Is that correct?

A. Are you speaking of that, now, as a part of the cooling tower?

Q. No, I am speaking of it as an independent bracket structure.

A. Oh, yes, of course, if that is some other structure, then it will support a greater weight, of course.

Q. Then you did not mean to say that this truss did not add strength to the structure?

(Testimony of Charles Moser.)

A. To which structure, this structure or the cooling tower?

Q. To a structure of that form, whether it is a cooling tower, or a wall bracket.

A. It makes a great deal of difference whether it is a cooling tower or wall bracket; if it is 'a cooling tower, if that timber is in vertical position, then it has nothing to do with the strength. If this is just lying far back, the rest of this way, then that does furnish a prop to that piece if that piece has to function lowest in that direction. [305—169]

Q. Professor, when you say "this" and "that," it means nothing in the record.

A. That is true enough, but I am trying to explain it to you.

Q. I am trying to understand why that truss won't strengthen the post against bending strains.

A. It isn't a truss with respect to the post.

Q. Assuming that I apply a force against the inside of this vertical post, with the truss in position as you have shown it here on this Moser A or Moser B, how does the resisting power of that post, as to bending strain, compare with the resisting power of the post 10 in your Moser C? A. It is less.

Q. How can any bending force applied between these two arms from the inside of the tower be any different in Moser A, or B, or in Moser C? I am assuming now that the force is not applied to the horizontal bar, but to the inside of the post between the two arms. A. At this point, say?

(Testimony of Charles Moser.)

Q. No, between the two arms, right at this point, right there.

A. This post, of course, is merely a unit portion of the structure, and below that would have a reproduction of this structure. Now, if a force is applied here, and this post is free to bend outward, this point must, of necessity, move upward. In the Model B, there is nothing to prevent this point from moving upward if the post will bend out. Of course, the bend is very slight, but it takes a very slight amount of motion to produce a relatively large stress.

Q. You just applied your bending stress below the inclined arm?

A. That is immaterial. The post bends in the same direction, regardless of where the load is applied.

Q. The post will bend at its weakest point, will it not?

A. The post bends throughout its entire length; it cannot bend [306—170] at one point alone.

Q. If there is a weak point in the post, it will bend at that weak point, won't it?

A. Well, the bend will be more pronounced at that point.

Q. And the breaking point in the defendant's construction, assuming that that stress was applied until the tower broke, would naturally come where?

A. Due to what sort of load?

Q. I am talking now of a horizontal pressure against the tower.



(Testimony of Charles Moser.)

The COURT.—On the outside?

A. It would break at the connection of this horizontal member.

Mr. FOULDS.—Q. Horizontal member 11?

A. 11, and post 10, or some of the connection details which give away.

Q. The point natural to break, what appears to be the weakest point, would be the connection between the vertical post 10 and the horizontal post 11: Isn't that correct? A. Yes.

Q. Now, referring to Moser B, in that structure that would not be the pronounced weak point, would it?

A. Yes, that is very much more pronounced; it would add no strength at all at that point.

Q. What I am trying to make clear is that in Moser B the vertical post would yield at the pivotal connection, while in Moser C the post would be held rigid and apt to snap: Isn't that correct?

A. That is correct, if you are assuming now a load which will collapse both structures, or either of them.

Q. I am assuming that a horizontal load or stress is applied to the side of these two towers.

A. That is a working load.

Q. A wind load is the load I think you refer to in your affidavit. A. Yes.

Q. With that horizontal load applied to those two towers, you find a marked breaking point in one, and no marked breaking [307—171] point in the other, don't you? A. Yes.

(Testimony of Charles Moser.)

Q. And the marked breaking point is in the defendant's tower?     A. No.

Q. Isn't there a rigid point which will not yield, in the defendant's tower, and a yielding point in the plaintiff's tower?

A. That is true, but the yielding that I am speaking of is collapse.

Q. But in structural work, a member that will yield is less apt to break than a member that is rigid: Isn't that correct?

A. By "a member," now, you refer to a tower, or some particular detail of it?

Q. I refer to a member which will snap and not yield, as compared with a member which will yield, and take for a comparison a rubber post and a glass post.

A. Of course, that all depends upon the amount of load that comes on the structure. If in one case the yielding amounts to collapse of the structure, and in the other case the yielding amounts to stability, then the rigid structure is the more stable of the two; but if it is a question of brittleness as against plasticity under the same load, it seems to me that is another sort of question.

Q. Assuming two towers constructed in accordance with Moser B, the points of connection between the horizontal members and the vertical members being flexible, and a tower constructed as Moser C, with these points being rigid, which of these structures would sustain the greater horizontal or wind stress?     A. Moser C.

(Testimony of Charles Moser.)

Q. I am assuming now that the material is of the same inherent strength. A. Moser C.

Q. What is your reason for that?

A. Because the members in that structure are so disposed that they have some structural stability. When I say "stability," I do not mean rigidity or [308—172] brittleness, or anything of that sort. In this case it has very much less structural stability, Moser B, as there is very much less horizontal stability, due to the fact that the connection between the horizontal deck member is insufficient to prevent rotation at its connection with the main vertical post.

Q. In Moser B the horizontal stress would be distributed throughout the entire length of the vertical post, would it not? A. As this stands?

Q. I am assuming a tower made up in accordance with the design.

A. The distribution of the load within the limits of its stability would be practically the same as it is in C.

Q. In C, wouldn't the stress come at the junction between the horizontal bar and the vertical bar?

A. There is stress there, yes.

Q. That would be the point of greatest stress, would it not? A. No.

Q. Are you sure of that?

A. I am sure of that, except that this drilling a hole here through the member 11 at that point makes a point of weakness; other than that, the stress at

(Testimony of Charles Moser.)

the center of this beam is the same as it is at the post.

Q. The whole argument, the whole opinion that you have expressed, is based upon the fact that in two of these exhibits the horizontal bar bends at the vertical post, and the other it does not: Isn't that correct?

A. You would hardly say that horizontal bar bends at the post; the horizontal bar ends at the post would be a better way.

Q. There are two unconnected horizontal bars, a plurality of unconnected horizontal bars in one, and the other is one single horizontal bar? A. Yes.

Q. That is the only distinction you find?

A. Yes. [309—173]

Q. If that horizontal bar was made unyielding, was a continuous horizontal bar joined together by plates or rivets in that form, they would be an identical structure?

A. If they were joined in such a way that the connection would be as strong as the original piece, it would be the identical structure as far as that particular feature is concerned.

Q. Have you read the depositions taken in New York? A. No.

Q. Assuming that in the Hart tower his method of support consisted of extending the members supporting his decks beyond the side post of his tower, and attaching the same to an inclined member which was, in turn, secured at its other end to the deck members below, thus forming a series of triangles



(Testimony of Charles Moser.)

whose third side consisted of his side posts, to these inclined members the louvers, consisting of either metal or wood, were secured by appropriate fastenings, assuming that that was the Hart tower, would you find it the same or the mechanical equivalent of the defendant's tower here?

Mr. TOWNSEND.—We ought to have something in the prior art showing that the structure actually existed.

Mr. FOULDS.—That is in the proofs, and I am going to offer that.

The COURT.—Mr. Foulds says it is in the evidence already.

Mr. TOWNSEND.—That is where we take issue. I have read over the depositions, and it does not show any such.

A. I cannot recall anything in your question by which I could form a definite opinion. There are no dimensions or anything given there by which one could determine what the stress situation would be.

Mr. FOULDS.—Q. You formed an opinion based on the Hart tower? A. As shown in the patent.

Q. You have assumed that the Hart tower showed two separate [310—174] horizontal members?

A. Yes.

Q. Now, assuming that that horizontal member in Hart extended beyond the side posts of his tower and was attached to the louver, is your opinion changed from that expression in your affidavit?

A. There, again, I can form no opinion until I know what the connection between the horizontal

(Testimony of Charles Moser.)

deck member and the post is, and, in turn, the connection between the post and the horizontal louver member.

Q. You made a model here of the Hart construction, didn't you?     A. Yes.

Q. That is which?     A. A.

Q. Assuming that the horizontal member 13 was extended out into the member which you have marked 22, would you find the mechanical equivalent of the defendant's structure?

The COURT.—Which is 22?

Mr. FOULDS.—This is 13, and this is 22.

The COURT.—I do not understand that question. You mean 13 and 22 are continued?

Mr. FOULDS.—Are one continuous piece.

The COURT.—Then it would be just the same as this, wouldn't it?

Mr. FOULDS.—That is what I want the witness to say.

A. That is a single strip of material in that case?

Q. Yes.     A. Yes, that would be.

Q. Then, in preparing that affidavit, did you consider the Coffey patent No. 1,158,107, the structure there shown?

A. If I have, I have referred to it specifically.

Q. I do not see that you mention it at all. Did he refer to this Coffey patent, Mr. Townsend?

Mr. TOWNSEND.—No. [311—175]

Mr. FOULDS.—That is all.

Redirect Examination.

Mr. TOWNSEND.—Q. When on cross-examina-

(Testimony of Charles Moser.)

tion you were asked if the extension beyond the post as a separate piece from the deck member was rigidly attached to the post, and if the post was, in turn, rigidly attached to the deck-supporting member—what are we to understand in regard to the comparison of such two parts, the horizontal piece connected with the post, in comparison with the defendant's structure?

A. If the two-pieced construction here is so made that the connection at the vertical post affords the same strength as a solid piece, then the two structures would be identical so far as that local stress situation would be concerned.

The COURT.—That is to say, if there were no screws in there, instead of two in both the supporting member and this arm of the louver, the two screws would keep the same rigidity subject to any weakness that might develop by virtue of the presence of screws?

A. No, it would be a question of whether the two screws there through the member would afford the same strength at this particular point that the solid piece does.

Q. That would be the only difference?

A. Yes. It is a question of whether the connection there at that point has the same strength to resist bending as this solid piece.

Mr. TOWNSEND.—Q. Then would that involve some consideration beyond the usual one of supporting a louver by an outhanger, as exemplified by Moser Exhibit "A" or "B"?

(Testimony of Charles Moser.)

A. I do not quite get the import of your question.

Q. Does the mere connection of any two members together that way cause the result that is accomplished in the defendant's device, or are there engineering constructions involved, to be considered, [312—176] stresses, loads, etc.?

A. Oh, yes, the loads must all be considered, the type of load that acts on the structure.

Q. Now, in the defendant's device, where you get the cross-members supporting the decks in one piece, and connected in the manner, in practice, as shown by C, can you add anything to what you have said, or to what was said in your affidavit as to the action there, in contrast or comparison with the action where we simply see A or B have the part rigidly connected to the post?

A. I think I have covered that stress situation pretty thoroughly in the affidavit. The horizontal deck members there support a vertical load. Now, in this case—

Q. (Intg.) You mean the horizontal members in C?

A. Well, in either case, that is, the horizontal deck members support a vertical load, in any tower. Now, in B, this deck member amounts to what we call a simple beam, having its maximum bending stress at the center. In Model C we have what is called a restrained beam; that is due to the fact that the horizontal deck member is continuous past the post, and is capable of resisting bending stresses



(Testimony of Charles Moser.)

at the posts. That is true to some extent in any connection; that is, if we would stick this on here or tighten up on this bolt you would have some degree of rigidity, but nothing at all compared to what you would have if the horizontal deck member were continuous. Now, where that is continuous we have a restrained beam, and the stress, if there were equal loads, would be one-half as great in the horizontal member in C as it would in B. With respect to the horizontal load, the stability of the structure, so far as this element is concerned, is determined altogether by the strength of the member as it passes the vertical post—I mean the strength of the horizontal member. In C, the horizontal member [313—177] at the post is capable of withstanding very great bending stresses, because the member passes there unimpaired, except the bolt hole at the center. In B, or in A, the horizontal members are broken at the post, and from an engineering point of view this structure would be unstable.

Q. B?

A. B. It is true that it has some degree of rigidity there; anything that you place against there has some slight rigidity; but with respect to a horizontal wind load which in some of the larger towers might run up to as much as, it might be 100,000 pounds, the structure might be unstable so far as these particular elements are concerned. Now, with respect to rigidity in the direction normal to the

(Testimony of Charles Moser.)

horizontal framing members, I might show what took place there by means of this box.

Mr. TOWNSEND.—I would ask that that be marked Defendant's Exhibit "UU."

(The model was marked Defendant's Exhibit "UU.")

A. If the two sides of the box are in place, then it has a great rigidity with respect to angular deformation, that is, in the direction of the diagonals of this box. If the sides of the box are relieved and merely hinged along the bottom that, in a measure, represents the louver situation in the tower. Now, the tower, then, has no stability, except the louvers would be rigidly attached to the tower; that is, if we had a member passing from tip to tip here of the louvers, some member that was capable of resisting bending stresses, then we might have some slight degree of rigidity; that is a little far afield in engineering practice, but whatever rigidity the louvers might contribute would be made possible by a member passing from tip to tip of the louvers that was capable of resisting bending [314—178] stresses; it would not add to it to merely tie the louver into this point, to the corner of this tower with the hope that would rotate at the corner of the tower. However, I repeat again, from an engineering point of view that would be a rather unstable sort of bracing.

Q. Now, referring a moment again to your Model C, representative of the defendant's structure, and

(Testimony of Charles Moser.)

your model B, representative of the plaintiff's structure, will you state whether or not the restrained beam action and construction of Model B is the same or different from the simple beam and louver extensions of Exhibit "B"?

A. No, it is not the same.

Q. Those are mechanically distinct and recognized differences mechanically—principles?

A. Yes.

Mr. TOWNSEND.—That is all.

Recross-examination.

Mr. FOULDS.—Q. You have assumed, Professor, that there is no end bracing on this tower, haven't you?

A. I have assumed that whatever bracing there is is similar to what is represented by these models.

Q. And if your prune box, Model UU, were braced at each end, it would be firm and rigid, would it not?

A. Well, of course, if anything is braced it is firm and rigid, but it is a question as to the nature of the bracing. If it is braced by any means shown in the prune box or B, or A, then it will be rigid.

Q. Do you mean to say that if a member of those triangular trusses were arranged on a one-piece vertical beam with the sides and ends of a rectangular structure and they were crossed-braced, as shown in the plaintiff's device, there would not be sufficient strength for all practical purposes?

A. May I see the plaintiff's device? [315—179]

Q. Haven't you seen it?

(Testimony of Charles Moser.)

A. I have seen illustrations of it in the patent.

Q. Aren't you familiar with the plaintiff's device?

Mr. TOWNSEND.—Show him the blue-print.

Mr. FOULDS.—Q. Aren't you familiar with the plaintiff's device? A. I am.

Mr. TOWNSEND.—What do you refer to? Do you want the blue-prints that you have in evidence, or do you want the Model G, which has been offered for illustrative purposes?

Mr. FOULDS.—Q. Are you familiar with the plaintiff's device?

A. You let me see the plaintiff's device and I will tell you.

Q. You testified about it in your affidavit, didn't you?

A. I do not want to commit myself to something here that is not shown to me.

Q. Haven't you attempted to testify about the plaintiff's device in your affidavit?

A. I have assumed that the Hart tower represents the plaintiff's device in all its essential features.

Q. Assuming that the tower was made up with the structural truss frames, and had the louver supports as illustrated in this Coffey patent, 1,158,107, wouldn't you find sufficient strength for all practical purposes?

A. Will you refer to some particular figure here?

Q. You may refer to Fig. 3, which shows the inclined louver support, vertical posts at each side,



(Testimony of Charles Moser.)

horizontal members extending from the horizontal decks to the ends of the louvers and shown in detail in Fig. 4 above—the plan view being shown in Fig. 1.

A. Fig. 3 is unstable against lateral loads.

Q. You are assuming that that is constructed, that figure, on all sides as shown in Fig. 1?

A. Yes.

Q. What is your reason for that?

A. The reason for that is the [316—180] same as is shown in either Models A or B.

The COURT.—I think he has made that very plain, what his theory with regard to it is. He has said the fact that it has a rotation there.

Mr. FOULDS.—Rotation at the post? A. Yes.

Q. Have you ever seen any cooling towers in this vicinity? A. Not to my knowledge.

Q. You never heard of one blown down?

A. I don't recall of ever hearing of one blown down.

Q. In steel skeleton construction, the horizontal beams are ordinarily joined at their ends to vertical posts? A. Yes.

Q. While in wooden construction, the wooden member ordinarily or very often passes the vertical post, doesn't it? A. Yes.

Q. That is a mechanical expedient or difference between steel construction and wood construction?

A. Yes.

Q. When you were comparing a steel tower with a wooden tower, you would naturally expect to find

(Testimony of Charles Moser.)

the horizontal members broken and joined at the vertical posts, wouldn't you?

A. It evidently is very often done, from looking at the drawing.

Q. That difference between steel construction and wood construction is a satisfactory engineering solution of the problem?

A. Of which problem?

Q. Of the problem of joining vertical and horizontal frame members.

A. Well, you would have to know what the particular structure was.

Q. Assuming a building of steel skeleton construction, in which there are vertical members and horizontal members, the vertical members acting as supports for the horizontal members would be naturally brought to the vertical members and there joined to the vertical members on each side?

A. Yes.

Q. And that would be the natural way of supporting steel skeleton [317—181] frames, wouldn't it? A. Yes.

Q. With wooden construction, we frequently find the horizontal beams carried past vertical beams and secured to the vertical beams by some mortise joint or some such construction? A. Yes.

Mr. TOWNSEND.—I have just one more question to ask Mr. Braun.

## TESTIMONY OF C. F. BRAUN, FOR DEFENDANT (RECALLED).

C. F. BRAUN, recalled for defendant.

Mr. TOWNSEND.—Q. Mr. Braun, will you please outline the development of the subject matter that Mr. Moser just has spoken of, and represented by your second patent in suit, which issued January, 1923, and which was filed in April, 1920?

A. We observed that most all atmospheric cooling towers which came within our experience seemed weak structurally; we noticed this on the Shell towers at Martinez, which were, as a matter of fact, later condemned, and some of the parties deteriorated had to be torn down for fear they would fall down, and we built a number of towers in accordance with the drawings shown on the first Braun patent; these towers lacked the desired stability. In an endeavor to overcome this, we undertook the design of the existing Braun type of tower, and extension of the deck-supporting members so as to support the louvers and form a continuous beam, and a triangular truss between this horizontal beam and the vertical beam was a result of this effort to increase the stability of the atmospheric type of cooling tower.

Q. When did that work begin, the design of that?

A. That work began rather late in 1918 or early in 1919.

Q. Just outline the progress of it.

A. This work was started [318—182] by me,

(Testimony of C. F. Braun.)

assisted by Mr. Houghton, and was later taken up by Mr. Shattuck, who had been in the service, on his return from the service.

Q. Had you developed the general principles of it prior to Mr. Shattuck's return from the service?

A. Yes, and Mr. Shattuck carried out the details of the design; the principles were developed prior to the time that he took the work up.

Q. Do you recall how soon after that you had embodied these principles in an actual tower?

A. We built in 1919 the first towers of the new type.

Q. Can you fix the time more definitely in 1919 when such towers were built?

A. The first tower was built very shortly after Mr. Shattuck's return, I don't exactly remember when he returned.

The COURT.—He gave us the date.

Mr. TOWNSEND.—Yes, he said he returned in March, 1919, is my recollection. Is that your recollection, your Honor?

The COURT.—Yes.

Mr. TOWNSEND.—Q. With that date, are you able to fix with any more definiteness when you erected the first tower? You said very shortly. Was it a week or ten days, or a month, or two months?

A. I think that we began work on the fabrication of a tower of this type within about a month after he returned.



(Testimony of Carl F. Braun.)

Mr. TOWNSEND.—That is all.

Cross-examination.

Mr. FOULDS.—Q. Are you making towers of steel as well as wood?

A. Not at the present time.

Q. You abandoned steel entirely?

A. We might make steel towers if there was demand for them. We do not think that they are as good as wooden towers. [319—183]

Q. The change to this continuous member was made when you changed from wood to steel, was it not?

A. No. The cooling tower shown in the first Braun patent is, I believe, shown as made entirely of steel.

Q. Did you extend your horizontal beam members of steel beyond the vertical posts to the louvers?

A. In that design the horizontal members did not extend.

Q. That was because it was steel, was it not?

A. No, it was not because it was steel.

Q. In steel construction, you do not pass a vertical support with the horizontal steel member, do you?

A. Frequently they pass the support.

Q. Where do you know of such a thing?

A. I know beams on our building that are 60 feet long that are supported every 20 feet.

Q. That would be, of course, for floor supports, or something of that kind?

(Testimony of Carl F. Braun.)

A. No, it would be a beam to carry a load.

Q. In a construction such as this tower, you would naturally use one piece when you would make it all lumber, and two pieces when making it of steel, as an engineering problem, wouldn't you?

A. No, we do not. We built the Braun tower as shown in the first Braun patent largely of wood and terminated the transverse wood members at the vertical members.

Q. Is that shown in your patent?

A. No, that is not shown in the patent; the patent is all steel, but the patent calls for the use of other materials than steel.

Q. Did you make a wood tower, that is, the horizontal support as well as the vertical support of wood before this construction you have spoken of?

A. I think that they were all made with a single steel bracket. That could as well have been *made* [320—184]

Q. You spoke of the Shell tower deteriorating; that was because of the rust, was it not, the kind of water used?

A. It was because of rust and corrosion.

Q. Not because of any structural defect?

A. A comparatively small amount of structural deterioration of the structural members made the tower unsuitable for further use, and the plant was dangerous.

Q. That is a particularly difficult water to handle

(Testimony of Carl F. Braun.)

in metal towers, isn't it, the water over at the Shell plant?

A. I consider that all waters are difficult to handle in towers.

Q. That isn't pure water at the Shell plant?

A. Practically no water pumped over cooling towers is pure; in fact, the very nature of its use causes a concentration of the water; as the water is recirculated over a tower a portion of it is condensed, evaporated, and the customers very seldom renew the water frequently, with the result that the salt in the water concentrates.

Q. Do you know of any other steel tower where the steel rusted and deteriorated to the extent that it did in the Shell tower?

A. Yes. I know that the tower that we built with steel brackets deteriorated very rapidly.

Q. But those were two isolated cases, weren't they? A. No.

Q. It is not a customary thing?

Q. Yes, it is a customary thing.

Q. That has been your experience with your tower?

A. It has been our experience with all steel towers, both of the atmospheric type and the closed type.

Mr. FOULDS.—That is all.

Mr. TOWNSEND.—Defendant rests.

Mr. FOULDS.—I want to offer the depositions taken in New York, which are here. [321—185]

The COURT.—The depositions will be admitted.

(Testimony of Carl F. Braun.)

(An adjournment was here taken until Tuesday, December 4, 1923, at ten o'clock A. M.) [322—186]

Tuesday, December 4, 1923.

Mr. TOWNSEND.—If your Honor please, in the hurry of closing the other day there were a couple of questions I should have asked Mr. Braun, and with your Honor's permission I would like to recall Mr. Braun for a few minutes.

The COURT.—Very well.

C. F. BRAUN, recalled for defendant.

Mr. TOWNSEND.—Q. Mr. Braun, are you familiar with the Pasadena Ice construction?

A. Yes, I am familiar with it.

Q. Did you see it during its erection?

A. I saw it during its erection.

Q. During what period of time?

A. January, February and March.

Q. Did you see it more than once?

A. Many times.

Q. How frequently? -

A. Several times a week I passed there going home.

Q. That would include the time between January 16, 1923, when the patent issued, would it, and the time when the counterclaim was filed on February 20, 1923? A. Yes.

Q. Now, did you examine the structure with particularity? A. Yes.

Q. Will you just briefly describe the structure in so far as it relates to the deck-supporting members, and the louver-supporting members?



(Testimony of Carl F. Braun.)

A. The structure is very similar to the second Braun patent. The deck supports extend beyond the posts and receive the louver boards, in a manner exactly similar to that shown on the model Exhibit "D."

Q. Do these cross-members appear in the photographs before you, of which there are six of the Pasadena Ice Company?

A. Yes, they appear in all six photographs. [323—187]

Q. And the louvers and their supporting connections, are they sufficiently clear for ordinary understanding?

A. Yes. One photograph shows the supporting connection with the louver board, and the other photographs show the supporting connections with the louver boards laid in place.

Q. Will you state whether there is any difference in construction and mode of operation over that shown in your construction and embodied in Exhibit "D"?

A. None as regards the frame decks and louver supports. There is a slight difference in the distributing system at the top of the tower; there is no redistributing deck on top.

Mr. TOWNSEND.—I think Mr. Braun wants to add a word or two in regard to the assumption that has been made if there was an extension beyond the vertical post to the louvers in line or approximate line with the deck, and if certain things took place would certain things be equivalent.

(Testimony of Carl F. Braun.)

Q. Now, in the matter of practice, Mr. Braun, can you tell us what you have found in practice in regard to the construction you have described just now in connection with your own tower represented by Exhibit "D" and the recent construction represented by the Pasadena Ice Company, particularly as to whether or not there would be any difference by merely supporting the louvers by wood or metal extensions, separate from the floor beams, and connected by one or two or a dozen bolts to the vertical supports?

A. The previous towers, with which I am familiar, including the Mitchell-Tappen cooling towers constructed at the Shell refinery at Martinez, and including the towers shown on the first Braun patent, have wooden deck-supporting members terminating at the column.

Q. Pardon me, do you mean that the Shell arrangement at Martinez [324—188] had wooden deck supporting-members?     A. Yes.

Q. Supported on the steel frame?

A. Supported on the steel posts, and terminating at these posts, and not extending beyond the posts.

Q. Were they bolted on?     A. They were bolted.

Q. With a single bolt?     A. With a single bolt.

Q. How is the supporting member for the louver fastened to the steel frame?

A. The supporting member for the louver really consisted of two angles, and each of those angles was riveted by a single rivet to vertical posts. In those structures the louvers added no structural

(Testimony of Carl F. Braun.)

strength to the tower, and did not in any way assist in the support of either the vertical components of the wind load or the horizontal components of the wind load. In a structure such as shown by Exhibit "D," having the members extending beyond the vertical columns and supporting the louvers, making use of the louvers as structural members, it is interesting to note that in the tower shown by Exhibit "D" approximately 38 per cent of the material in the tower is in the louvers.

Q. Is that true of towers generally?

A. That is true generally of this type of tower.

The COURT.—What proportion of that is in the panel?

A. Looking at it, I would say possibly 35 per cent would be in the board, and perhaps 3 per cent in the members at the end of the board. That 38 per cent does not include the projection of the deck members, but only the louver panel. Really, the entire 38 per cent would be in the panel, and is differentiated say 35 per cent in the boards and possibly 3 or 4 per cent in the end members of the panel. So that here is a large amount of material in the tower which heretofore has not [325—189] been used for structural strength, although one of the big factors in cooler design is structural strength. Even if the horizontal part of the louver bracket were in direct alignment with the deck member, and even if it were secured to the vertical posts by more than one bolt or one rivet, and

(Testimony of Carl F. Braun.)

even if it were of the same size or same strength as the horizontal deck-supporting member, it still would not measurably approach the strength of a continuous beam. To splice a beam is a very difficult detail, involving a great number of rivets, bolts, or nails, as the case may be, and considerable extraneous material in order to splice plates in steel beams and cleats in wooden beams, and, even so, it is very difficult to approach with a splice or joint the strength of the original beam and such splice, even where made elaborately, seldom exceeds 75 per cent of what the strength would be of a continuous solid beam.

Mr. TOWNSEND.—Q. That also involves the supposition, does it not, of equality of strength of the two parts to be joined?

A. I include that in my description. I am quite certain that if the two members to be joined were of equal strength, and as Mr. Foulds has attempted to show that it is not usual to terminate wooden members at the vertical supports, I wish particularly to call attention to the fact that wooden members are terminated actually at the vertical supports, as is shown clearly by two exhibits on file in this case, namely, the drawing of the Mitchell-Tappen towers, at the Shell Company, and the first Braun patent.

Q. Is there any substantial difference in the metal construction or wood construction as between the meeting of vertical and horizontal members?



(Testimony of Carl F. Braun.)

A. There is absolutely no essential [326—190] or inherent difference in that regard. If a load is to be carried extraneously on a cantilever beam, that is, by a beam extending past the column, the solid beam would be likely to be extended in exactly the same manner with wood as with steel.

Q. There is not any inherent difference between the steel and wood in that respect?

A. There is no inherent difference. And referring to my remarks about one or two rivets not being of any great importance, there has not been shown in any of the exhibits, or even in the Hart drawing, which was submitted for the purpose of supposition, a splice, anything that could be called a splice. I believe one drawing submitted as a supposition has two rivets in it, whereas all drawings submitted as evidence had one rivet, but those two rivets cannot in any way be called a structural splice. I do not believe that they would give one-twentieth of the strength of the continuous beam, assuming both members were of equal strength.

Q. In your experience, and from any of the patents or drawings in evidence, has there been any showing anywhere at any time to your knowledge where the extension of whatever sort it has been apparently designed for the purpose and intention of co-operating with the deck member, as stress or load supporting or resisting member?

A. No. I have never seen any such structure. Apparently, louvers have always been considered

(Testimony of Carl F. Braun.)

as an appendage to hang onto the tower, and hold them down. The use of this material for structural purposes had never been recognized.

Mr. TOWNSEND.—I think it is clear to your Honor that my point is that these extensions, whatever they have been, have been merely hangers to support louvers. [327—191]

The COURT.—If that is not clear by this time it never will be. I have heard it often enough.

A. I would like to make one more thing clear, and that is, in a cooling tower there is an additional reason for resisting the number and size of the structural members in the tower, and that is that all structural members offer resistance to wind, and if too many structural members were used in the tower, an insufficient amount of wind would enter the tower and the water might, therefore, be not properly cooled. This, to my mind, is a very important feature in cooling tower design, to so design the tower that there is a comparatively free passage for wind.

Mr. TOWNSEND.—Q. Would you mind just telling the Court what you told me before taking the stand of an experience with one of your towers at the Shell Company, where your metal braces broke?

A. We had a rather remarkable proof of the efficiency of this type of bracing in a tower which we installed for the Shell Company, the third tower which we installed for the Shell Company, on a high hill overlooking Carquinez Straits; this tower

(Testimony of Carl F. Braun.)

had in it some metal tie rods similar to the tie rods in Model D, and the tower was subjected to a very severe gale, and the fastenings of all these tie rods broke, apparently the fastenings were weaker than the tie rods, but the stability of the structure was unchanged. I presume that the breaking of the tie rod fastenings, was due to the slight flexibility in the wooden structure, but the structure was not distorted in any way, and we later replaced these fastenings.

Q. That is the structure which you say embodied the principles of Exhibit "D"?

A. Practically identical to the model.

Mr. TOWNSEND.—That is all. [328—192]

Cross-examination.

Mr. FOULDS.—Q. Is this Pasadena tower that you have referred to one of the composite type that you refer to in your patent?

A. Yes, it is a composite type.

Q. What do you mean by a composite type of tower?

A. There are two meanings for a composite type of tower.

Q. What do you mean in your patent?

A. I may have used the composite in more than one place. If, therefore, you will show me the patent, and show me the specified place that "composite" is used I will endeavor to then state.

Q. You do not recall now?

A. Yes. I think that possibly I have used "composite" in more than one sense. I do not offhand

(Testimony of Carl F. Braun.)

remember exactly where I have used "composite" in the patent. I have at times used "composite" to mean a tower made up of more than one material. I have also used "composite" to mean, and I believe I have used it in the sense of the patent, to mean a tower made up with fabricated sections, to be assembled at the point of erection.

Q. In that sense, was the Pasadena tower a composite tower?

A. To a considerable extent. In looking at the photographs, I see that the louver panels on the end have been removed before being installed.

Q. Do you know whether they were nailed together on the ground and then elevated to a position on the tower?

A. I do not know whether they were nailed together on the ground or elsewhere, but they were nailed together in the panel before they were elevated.

Q. Isn't it the customary way to nail the panels together on the ground and elevate them to the position, rather than to nail the boards in position on the tower?

A. No, I have never seen [329—193] or heard of that being done prior to the time that we did it. It may be of interest to know that the Mitchell-Tappen instructions supplied with the Martinez towers instructed that the louver boards be installed in place.

Q. You find that your louver sags, don't you?

A. What louvers do you refer to?



(Testimony of Carl F. Braun.)

Q. The louvers referred to in the patent.

A. That the louver sagged?

Q. Yes. A. No, not that I remember.

Q. Did you ever construct a tower, as shown in that patent, with posts at the corner only, four posts?

A. Yes, I believe we have constructed square towers.

Q. And you found that if the length of the louver section is excessively great, intermediate boards may be used to secure the various louver boards in position and prevent them from sliding or sagging?

Mr. TOWNSEND.—What patent are you reading from?

Mr. FOULDS.—I am reading from lines 98 to 102 of your patent of January 16, 1923, No. 1,442,784.

A. I think that probably refers to a strip that is sometimes nailed across the louver boards.

The COURT.—In the middle of the panel?

A. In the center of the panel.

Mr. FOULDS.—Then where you use four posts as shown in your patent, you apply a strengthening board across the center of the panel to keep it from sagging, do you?

A. No, if we apply that strip it is to tie the boards together.

Q. When the boards sag they do not give any strength to the tower, do they?

A. Yes, they would give strength to the tower.

(Testimony of Carl F. Braun.)

Q. Even though they sag?

A. Yes, particularly one board may [330—194] warp and the others may not.

Q. Is the theory which you have outlined as to relative strength of an integral to a spliced beam well known to skilled mechanics?

A. No, I think the principles of beams are not known to mechanics. The design of structures and the principles of beams is a branch of civil *engineer*, and requires considerable knowledge.

Q. You don't think that an ordinary skilled mechanic would know that an integral beam was stronger than a spliced beam?

A. No, I don't think that an ordinary mechanic would know whether an integral beam were stronger or not than a properly spliced beam.

Q. Do you think that an ordinary skilled mechanic would know enough to extend a horizontal supporting member as a bracket?

A. Yes, but he would not know enough to extend a horizontal member and use it for giving structural strength.

Q. Does the bracket give structural strength?

A. A bracket appended to a structure ordinarily would not add to the structural strength of the structure, and in the specific case of the cooling tower it does not add to the strength of the structure to any degree.

Q. You never realized, when you applied for this patent, that your so-called extended decks gave any structural strength to the structure, did you?

(Testimony of Carl F. Braun.)

A. Yes, I did.

Q. Why didn't you mention it in your patent at any place?

A. Possibly I did. I do not remember.

Q. Can you refer to any place in your patent where you refer in any way or intimate that any strength would be added to your structure by them?

Mr. TOWNSEND.—The patent is the best evidence of its contents, and also it is well established by law that a patentee [331—195] is entitled to all the considerations and benefits arising from his invention, whether he has mentioned them or not.

A. I will state specifically that the development of the extended beam and making use of the louvers for structural support was the direct outcome of our endeavoring to reduce the number of internal bracing members, which seriously obstruct the entry of the wind to the tower. It was specifically for that purpose.

Mr. FOULDS.—Q. Was not the strengthening feature of your device first suggested to you by Professor Moser after this case was started?

A. No.

Q. Now, this tower that you say broke, was one of your towers?

A. I did not say that the tower broke.

Q. The fastenings of the tower broke, the tie-rods, as you call them?

A. The fastenings of the tie-rods broke, yes.

Q. That was the only one you ever knew to break, was it not?

(Testimony of Carl F. Braun.)

A. The only what I ever knew to break?

Q. Cooling towers.

A. No, I have known of a great many cooling towers to fail.

Q. Have you ever had experience with one?

A. I have read articles concerning it, and I have seen a great many photographs of cooling tower failures. They are very common.

Q. But you have never seen an instance?

A. Yes, I firmly have in my mind that I have seen a cooling tower in a wreck, but I could not place right now where it was.

Q. You cannot tell anything about where it was?

A. No, I cannot place right now where it was.

Q. And, according to your own knowledge in the cooling tower art, the plaintiff's cooling tower with the two sections of the extended decks stands up under every known stress?

A. I know of no plaintiff's tower with extended decks.

Q. Did you have a cooling tower at the Shell refinery at [332—196] Martinez in which the decks were extended by what you call a tie rod to the top edge of the inclined louver?

A. No. The deck members terminated at the vertical posts and the tie rods were on the interior of the tower, and between the posts.

Q. This tower that you erected for the plaintiff at Martinez had a horizontal member bolted to a vertical post, and on the other side there was a piece of metal extended out in approximately the



(Testimony of Carl F. Braun.)

line of the deck to the tops of the louver, wasn't there?

A. There was a small angle connected by one rivet to the vertical column, and by one rivet to the vertical tie member, and this angle was to support the walk-away. It was not an extension of the deck in any sense of the word.

Q. Then you did not have at Martinez a member in the tower which was in effect a continuation of the horizontal member of the deck, or extended from the termination of the horizontal deck member to the top of the louver in a horizontal direction, or approximately so?

A. I answered that question once before, but before I answer it again I would like to look at the drawing again.

Q. Why play with words. Can't you tell me whether you had approximately the structure that I have described?

A. No, we did not have the structure that you have described.

Q. Did you ever know of any of these old cooling towers of the plaintiff to break under stress, of your own knowledge?

A. I know that the two towers at Martinez became so unstable that they were condemned as being dangerous and unsafe.

Q. You mean that the material of the tower rusted?

A. I mean that the material of the tower deteriorated.

(Testimony of Carl F. Braun.)

Q. That was not a structural defect, but was a mere rusting away of the steel, was it not?

A. It was a deterioration of [333—197] the metal in the structure.

Q. But so far as the framework was concerned, the framework held even with that deteriorated condition of the material, didn't it?

A. The framework was condemned as being unsafe to withstand any unusual condition such as wind.

Q. Because it had rusted away?

A. Because there was insufficient strength in the structure.

Q. You mean that because it had rusted away that there was insufficient strength remaining?

A. The tower had not rusted away.

Q. Parts of the tower had rusted, hadn't they?

A. The tower had deteriorated, some of the members had rusted.

Q. That was the sole reason for the deterioration, as you call it?

A. Yes, the rust would be the principal reason.

Q. You have never had any experience, personally, with any tower of the plaintiff which has not stood up under all stresses of climate and weather?

A. I have had no experience with towers of plaintiff, other than the two towers at Martinez.

The COURT.—How long were those towers there at Martinez?

A. They were there about four years.

(Testimony of Carl F. Braun.)

Q. The water that passed through them for cooling purposes was water that had been used for the condensation of distillates? A. Yes.

Q. And therefore had a considerable concentration of salts?

A. All cooling towers waters have concentration of salts, and that is one of the reasons that cooling towers have to be made very strong.

Mr. FOULDS.—That is all.

Mr. TOWNSEND.—That is all. I call attention to the fact that we desire to add claims 5, 6, and 7 of the second patent as infringed. That is our case.

Mr. FOULDS.—That is our case.

[Endorsed]: Filed Mar. 12, 1924. Walter B. Maling, Clerk. By J. A. Schaertzer, Deputy Clerk. [334—198]

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(Title of Court and Cause.)

### MEMORANDUM OPINION.

December 6, 1923.

PARTRIDGE, JOHN S. (Orally).

This matter is submitted for final decision.

The matter involved consists of a tower designed for the cooling of liquids. It is used principally for cooling of water which has been used to circulate around condensers of various types, particularly those used for the condensation of gasoline and distillate and for the cooling of water which

has been used for condensation of ammonia in ice plants.

The art is an old one. Cooling towers consisting of a series of decks over which the water flows and exposed to the air, have been in existence for over seventy years. They consist of two types: One is known as the "atmospheric cooling tower," which is involved here; and one is a closed tower with forced draft.

The patent of the plaintiff in suit has novelty only in one respect. These cooling towers consist of various decks known as "drip decks" where the water is distributed at the top of the tower and flows down from one deck to another and passes between certain spaces between what is known as "drip bars" or "steps."

The patent of the plaintiff consists of what is known as a "spline," which is a spacing device placed between the various parts of the drip deck to keep them apart and at the same time, to take up the necessary expansion or warping due to the presence of the liquid and the passage of the air over the parts.

The defendant, in place of using this movable spline or piece of wood to separate these parts of the deck, has adopted a metal strip, consisting preferably of brass or copper, which is fastened across these drip bars or integral parts of the drip deck so that they can expand not only latitudinally but longitudinally.

In my opinion there is, in the first place, grave doubt as to whether or not the spline of the plain-



tiff [335] constitutes any novelty. But if it is so, it is clear that the fixed strip used by the defendant does not constitute any infringement. The injunction prayed for by the plaintiff will therefore be denied.

The defendant, however, counterclaims, claiming an infringement by virtue of the fact that the supporting members which hold up the various decks extend beyond the vertical members so as to support what are known as the "louvers," which are pieces of wood fastened to the outside, admitting the air and preventing the escape of the sprays of water.

The prior state of the art was such that in place of these transverse members being continuous and extending out to support the louvers, separate pieces were nailed or spiked on to the vertical members.

In my opinion there is nothing novel in the device claimed by the defendant. It seems to have been anticipated by prior patents. Therefore, the injunction prayed for in the cross-bill will be denied.

Another cross-bill or counterclaim, however, is based upon the fact that plaintiff has interfered with defendant by sending letters to prospective customers claiming that the device of the defendant was an infringement of patents of the plaintiff. Now the Court having found that it is not an infringement, the injunction prayed for by the answer, restraining the plaintiff from interfering with the business of the defendant in the manner set out in the cross-bill will be granted.

[Endorsed]: Filed Dec. 6, 1923. Walter B. Maling, Clerk. [336]

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In the Southern Division of the United States District Court for the Northern District of California, Second Division.

IN EQUITY—No. 923.

COOLING TOWER COMPANY, INC. (a Corporation),

Plaintiff,

vs.

C. F. BRAUN & CO. (a Corporation),

Defendant.

### INTERLOCUTORY DECREE.

This cause having come on to be heard upon the pleadings, proceedings and proofs herein, taken and filed on behalf of both parties, and after due proceedings had and upon due consideration

IT IS ORDERED, ADJUDGED AND DECREED as follows:

(1) That the plaintiff's patent sued on No. 1,010,020, issued to the Mitchell-Tappen Company as assignee of Barton H. Coffey on the 28th day of November, 1911, even if valid, is not infringed and the bill is dismissed.

(2) That the plaintiff has been guilty of unfair competition against the defendant by making improper and unlawful use of its alleged ownership of various patents on Cooling Towers, including

the patent aforesaid in suit, and has unlawfully and without justification threatened, both orally and in writing, defendant's customers and prospective customers with suits for infringement if they used defendant's device and has otherwise unlawfully intimidated, harassed and annoyed defendant's said customers, and has disseminated [337] malicious and untrue representations against defendant and its officers in an endeavor to secure the trade of the defendant and to injure the reputation, business and goodwill of the defendant, and has otherwise injured and damaged defendant in its legitimate business.

(3) That defendant's counterclaim on Braun patent No. 1,442,784, dated January 16th, 1923, is dismissed for that said patent does not involve novelty and appears to be anticipated by prior patents.

(4) That no finding is made with respect to the first Braun patent No. 1,334,515, dated March 23d, 1920, set up in defendant's counterclaim, in view of the withdrawal of said patent from suit by defendant.

(5) That a writ of injunction shall issue out of this court perpetually enjoining and restraining the plaintiff, its officers, directors, clerks, attorneys, servants, workmen, agents and employees, and others acting under their direction, from issuing letters or advertisements or publishing statements in any form whatsoever, either written or oral, claiming that defendant's Water Cooling Tower devices infringe said alleged letters patent No. 1,010,020,

or any other letters patent of plaintiff, and from sending circulars or letters to any customer or representative or prospective customer of this defendant threatening such person or persons with litigation or prosecution, or with the costs and expenses of litigation, or otherwise publishing statements, either written or oral, intended, or by a reasonable construction likely or apt, to cause injury or damage to this defendant in the business of manufacture, use and/or sale of said Water Cooling Towers.

(6) That the matters affecting said counterclaim for [338] unfair competition be and the same is hereby referred to the Hon. Harry M. Wright, as Special Master in Chancery of this Court, to take and state the damages which defendant has sustained by reason of each unlawful and unfair acts of plaintiff and also the profits which have accrued to plaintiff by reason of its unlawful acts as aforesaid; and the plaintiff, its directors, officers, clerks, attorneys, servants, workmen, agents and employees, and others acting under their direction, are hereby directed and commanded to attend before said Master from time to time, as required and to produce before him such books, papers, documents, vouchers and records as the Master may require.

(7) That the defendant do recover of the plaintiff its costs and disbursements in this suit, in accordance with the rules of this Court; and that the question of increase of damages and all further ques-



tions be reserved until the coming in of the Master's Report.

JOHN S. PARTRIDGE,

Judge.

Dated: San Francisco, California, December 17, 1923.

[Endorsed]: Filed and entered Dec. 17, 1923.  
Walter B. Maling, Clerk. [339]

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(Title of Court and Cause.)

PERPETUAL INJUNCTION.

The President of the United States, to Cooling Tower Company, Inc., its Officers, Directors, Clerks, Attorneys, Servants, Workmen, Agents and Employees, and Others Acting Under Their Direction:

The above cause having come on to be heard on bill of complaint and answer, including setoff, counterclaim and cross-complaint, and the defendant, C. F. Braun & Co., having by decree dated the 17th day of December, 1923, obtained an allowance for an injunction, as prayed for in its setoff, counterclaim, and cross-complaint;

NOW, THEREFORE, we, having regard to the matters in said setoff, counterclaim, and cross-complaint contained, do hereby permanently and perpetually, strictly enjoin and restrain you, the said Cooling Tower Company, Inc., your, and each of your officers, directors, clerks, attorneys, servants, workmen, agents and employees, and others acting



Inc. (a corporation), by exhibiting to Alex B. Tappen as Pres. of said Cooling Tower Co., Inc., a corporation, at 15 John St., N. Y. C., the within original, and at the same time leaving with him a copy thereof.

Dated Jan. 11, 1924.

WM. C. HECHT,

United States Marshal, Southern District of New York.

(J. A. N.)

[Endorsed]: Filed Jan. 19, 1924. Walter B. Maling, Clerk. By J. A. Schaertzer, Deputy Clerk. [341]

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(Title of Court and Cause.)

**CERTIFIED COPY OF PERPETUAL INJUNCTION.**

The President of the United States, to Cooling Tower Company, Inc., its Officers, Directors, Clerks, Attorneys, Servants, Workmen, Agents and Employees, and Others Acting Under Their Direction:

The above cause having come on to be heard on bill of complaint and answer, including setoff, counterclaim and cross-complaint, and the defendant, C. F. Braun & Co., having by decree dated the 17th day of December, 1923, obtained an allowance for an injunction, as prayed for in its setoff, counterclaim, and cross-complaint;

NOW, THEREFORE, we, having regard to the matters in said setoff, counterclaim, and cross-complaint contained, do hereby permanently and perpetually, strictly enjoin and restrain you, the said Cooling Tower Company, Inc., your, and each of your officers, directors, clerks, attorneys, servants, workmen, agents and employees, and others acting under their direction, from issuing letters or advertisements or publishing statements in any form whatsoever, either written or oral, claiming that defendant's Water Cooling Tower devices infringed alleged letters patent No. 1,010,020, in suit herein or any other letters patent of plaintiff, and from sending circulars or letters to any customer or representative or prospective customer of this defendant threatening such person or persons with litigation or prosecution, or with the costs and expenses of litigation, or otherwise publishing statements, either written or oral, intended or by a reasonable construction likely or apt, to cause injury or damage to this defendant in the business of manufacture, use and/or sale of said Water Cooling Towers.

Hereof fail not under the penalty of the law thence ensuing. [342]

WITNESS, the Honorable JOHN S. PARTRIDGE, Judge of the United States District Court for the Northern District of California, this 27th day of December, 1923.

[Seal]                      WALTER B. MALING,  
Clerk of the United States District Court for the  
Northern District of California.

By J. A. Schaertzer,  
Deputy Clerk.



## No. 923.—EQUITY.

(Title of Case.)

United States of America,

Northern District of California,

City and County of San Francisco,—ss.

I, Walter B. Maling, Clerk of the United States District Court for the Northern District of California, do hereby certify the foregoing to be a full, true and correct copy of the original perpetual injunction, issued December 27th, 1923, in the above-entitled cause.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said District Court this 27th day of December, A. D. 1923.

[Seal]

WALTER B. MALING,

Clerk of the United States District Court, Northern District of California.

By J. A. Schaertzer,  
Deputy Clerk.

(RETURN ON SERVICE OF WRIT.)

United States of America,

South. District of Cal.,—ss.

I hereby certify and return that I served the annexed perpetual injunction on N. O. Fleming by handing to and leaving a true and correct copy thereof with N. O. Fleming personally at Hunting-

ton Park in said District on the 8th day of January,  
A. D. 1924.

A. C. SITTEL,  
U. S. Marshal.

By H. H. Yonkin,  
Deputy.

[Endorsed]: Filed Jan. 24, 1924. Walter B.  
Maling, Clerk. By J. A. Schaertzer, Deputy Clerk.  
[343]

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In the Southern Division of the United States Dis-  
trict Court for the Northern District of Cali-  
fornia, Second Division.

IN EQUITY—No. 923.

COOLING TOWER COMPANY, INC. (a Cor-  
poration),

Plaintiff,

vs.

C. F. BRAUN & COMPANY (a Corporation),  
Defendant.

PETITION FOR APPEAL.

To the Honorable Judge of the United States Dis-  
trict Court for the Northern District of Cali-  
fornia, Southern Division.

The above-named plaintiff feeling aggrieved by  
the decree rendered and entered in the above-  
entitled cause on the 17th day of December, 1923,  
does hereby appeal from said decree to the Circuit  
Court of Appeals for the Ninth Circuit for the

reasons set forth in the assignment of errors, filed herewith, and it prays that its appeal be allowed and that citation be issued as provided by law, and that a transcript of the record, proceedings, documents and exhibits upon which said decree was based, duly authenticated, be sent to the United States Circuit Court of Appeals for the Ninth Circuit, under the rules of such court in such cases made and provided.

And your petitioner further prays that the proper order relating to the required security to be required, be made.

EDWARD A. O'BRIEN,  
ASHLEY & FOULDS,  
Solicitors and Counsel for Plaintiff.

[Endorsed]: Filed Jan. 15, 1924. Walter B. Maling, Clerk. By J. A. Schaertzer, Deputy Clerk.  
[344]

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In the Southern Division of the United States District Court for the Northern District of California, Second Division.

IN EQUITY—No. 923.

COOLING TOWER COMPANY, INC. (a Corporation),

Plaintiff,

vs.

C. F. BRAUN & COMPANY (a Corporation),  
Defendant.

### ASSIGNMENT OF ERRORS.

Now comes the plaintiff in the above-entitled cause and files the following assignment of errors upon which it will rely upon the prosecution of the appeal in the above-entitled cause, from the decree made by this Honorable Court on the 17th day of December, 1923.

1. That the said United States District Court for the Northern District of California, Southern Division, erred in that it erroneously decreed that:

That plaintiff's patent sued on No. 1,019,020 issued to the Mitchell-Tappen Company as assignee of Barton H. Coffey on the 28th day of November, 1911, even if valid, is not infringed and the bill is dismissed.

2. That the said United States District Court for the Northern District of California, Southern Division, erred in that it erroneously decreed that:

That the plaintiff has been guilty of unfair competition against the defendant by making improper and unlawful use of its alleged ownership of various patents on Cooling Towers, including the patent aforesaid in suit, and has unlawfully and without justification threatened, both orally and in writing, defendant's customers and prospective customers with suits for infringement if they used defendant's devices and has otherwise unlawfully intimidated, harassed and annoyed defendant's said customers, and has disseminated malicious and untrue representations against [345] defend-



ant and its officers in an endeavor to secure the trade of the defendant and to injure the reputation, business and goodwill of the defendant, and has otherwise injured and damaged defendant in its legitimate business.

3. That the said United States District Court for the Northern District of California, Southern Division, erred in that it erroneously decreed that:

That no finding is made with respect to the first Braun patent No. 1,334,515, dated March 23d, 1920, set up in defendant's counterclaim, in view of the withdrawal of said patent from suit by defendant.

4. That the said United States District Court for the Northern District of California, Southern Division, erred in that it erroneously decreed that:

That a writ of injunction shall issue out of this court perpetually enjoining and restraining the plaintiff, its officers, directors, clerks, attorneys, servants, workmen, agents and employees, and others acting under their direction, from issuing letters or advertisements or publishing statements in any form whatsoever, either written or oral, claiming that defendant's Water Cooling Tower devices infringed said alleged letters patent No. 1,010,020, or any other letters patent of plaintiff, and from sending circulars or letters to any customer or representative or prospective customer of this defendant threatening such person or persons with litigation or prosecution, or with the costs and expenses of litigation, or otherwise pub-

lishing statements, either written or oral, intended, or by a reasonable construction likely or apt, to cause injury or damage to this defendant in the business of manufacture, use and, or sale of said Water Cooling Towers.

5. That the said United States District Court for the Northern District of California, Southern Division, erred in that it erroneously decreed that:

That the matters affecting said counterclaim for unfair competition be and the same is hereby referred to the Hon. Harry M. Wright, as special Master in Chancery of this Court, to take and state the damages which defendant has sustained by reason of such unlawful and unfair acts of plaintiff and also the profits which have accrued to plaintiff by reason of its unlawful acts aforesaid; and the plaintiff, its directors, officers, clerks, attorneys, servants, workmen, agents and employees, and others acting under their direction, are hereby directed and commanded to attend before said Master from time to time, as required, and to produce before him such books, papers, documents, vouchers and records as the Master may require. [346]

6. That the said United States District Court for the Northern District of California, Southern Division erred in that it erroneously decreed that:

That the defendant do recover of the plaintiff its costs and disbursements in this suit, in accordance with the rules of this court; and

that the question of increase of damages and all further questions be reserved until the coming in of the Master's report.

7. That the said court erred in that it erroneously found and decreed that the plaintiff's patent No. 1,010,020 was not infringed by the defendant.

8. That the said court erred in that it erroneously decreed that the bill of complaint be dismissed.

9. That the said court erred in that it erroneously found and decreed that the plaintiff has been guilty of improper or unlawful use of its alleged ownership of various patents on cooling towers.

10. That the said court erred in that it erroneously found and decreed that the plaintiff had been guilty of improper or unlawful use of its ownership of the patent in suit.

11. That the said court erred in that it erroneously found and decreed that the plaintiff did unlawfully or without justification threaten defendant's customers or prospective customers with suits for infringement if they used defendant's devices.

12. That the said court erred in that it erroneously found and decreed that the plaintiff did unlawfully intimidate, harass or annoy defendant's customers.

13. That the said court erred in that it erroneously found and decreed that plaintiff did dis-

seminate malicious and untrue representations against defendant.

14. That the said court erred in that it erroneously found and decreed that the plaintiff had done any unlawful [347] or improper acts or things in an endeavor to secure the trade of the defendant or to injure the reputation, business or goodwill of the defendant or otherwise, or that plaintiff did in any manner injure or damage the defendant in its legitimate business or otherwise.

15. That the said court erred in that it erroneously found and decreed that a writ of injunction should issue against the plaintiff, its officers, workmen, agents, employees or others acting under its direction.

16. That the said court erroneously decreed that the plaintiff be enjoined or restrained from claiming that defendant's water cooling towers infringe letters patent No. 1,010,020.

17. That the said court erroneously decreed that plaintiff be restrained from claiming that defendant's water cooling towers infringe any letters patent of plaintiff.

18. That the said court erroneously decreed that plaintiff be restrained from sending circulars or letters to any customer or representative or prospective customer of defendant threatening such person or persons with litigation or prosecution or with costs and expenses of litigation or otherwise publishing statements intended or by reasonable construction likely or apt to cause injury or



damage to defendant in the manufacture, use or sale of water cooling towers.

19. That the said court erred in that it erroneously decreed that the defendant recover of plaintiff, the costs and disbursements of this suit.

20. That the said court erred in that it erroneously found that the patent in suit of plaintiff has novelty only in one respect.

21. That the said court erred in that it erroneously [348] found that the patent or invention of plaintiff "consists of what is known as a 'spline' which is a spacing device placed between the various parts of the drip deck to keep them apart and at the same time to take up the necessary expansion or warping due to the presence of the liquid and the passage of the air over the parts."

22. That the said court erred in that it erroneously found that the defendant in place of using the movable spline or piece of wood to separate the parts of deck, had adopted a metal strip, consisting *preparably* of brass or copper which is fastened across the drip bars or integral parts of the drip deck so that they can expand not only latitudinally but longitudinally.

23. That the said court erred in that it erroneously found that there is doubt as to whether or not the spline of the plaintiff constitutes novelty.

24. That the said court erred in that it erroneously found and decreed that the court having found that the device of the defendant is not an infringement of the patent of plaintiff, the injunction prayed for by the answer, restraining the

plaintiff from interfering with the business of the defendant in the manner set out in the cross-bill will be granted.

25. That the said court erred in that it did not find, adjudge, and decree as requested by plaintiff, that the defendant has infringed the plaintiff's patent 1,010,020.

26. That the said court erred in that it did not find, adjudge, and decree as requested by plaintiff, that the manufacture and sale of the device of the defendant constitutes an infringement of the plaintiff's patent 1,010,020.

27. That the said court erred in that it did not find, adjudge and decree as requested by plaintiff, that the defendant be enjoined and restrained from infringing [349] plaintiff's letters patent No. 1,010,020.

28. That the said court erred in that it did not find, adjudge and decree as requested by plaintiff that the defendant be required to account for and pay to plaintiff the profits derived by it from its infringement of plaintiff's patent No. 1,010,020 and the damages suffered by plaintiff thereby.

29. That the said court erred in that it did not adjudge and decree as requested by plaintiff, that the plaintiff recover costs against the defendant.

30. That the said court erred in that it erroneously permitted Carl F. Braun a witness on behalf of defendant to testify, over the objection of plaintiff, to conversations with an employee of Union Oil Co.

31. That the said court erred in that it erroneously admitted over the objection of plaintiff in-

competent and hearsay testimony of the witness Carl F. Braun on behalf of defendant as to alleged acts and conversations of one Fleming.

32. That the said court erred in that it erroneously admitted over the objection of plaintiff incompetent and improper testimony of the witness Carl F. Braun as to alleged acts and conversations of one Fleming.

33. That the said court erred in that it erroneously admitted over the objection of plaintiff incompetent, improper and hearsay testimony of the witness Carl F. Braun, on behalf of defendant as to alleged acts and conversations of one Fleming.

EDWARD A. O'BRIEN,  
ASHLEY & FOULDS,

Solicitors and Counsel for Plaintiff.

[Endorsed]: Filed Jan. 15, 1924. Walter B. Maling, Clerk. By J. A. Schaertzer, Deputy Clerk.  
[350]

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In the Southern Division of the United States District Court for the Northern District of California, Second Division.

IN EQUITY—No. 923.

COOLING TOWER COMPANY, INC., (a Corporation),

Plaintiff,

vs.

C. F. BRAUN & COMPANY (a Corporation),  
Defendant.

ORDER ALLOWING APPEAL.

On the motion of Edward A. O'Brien, Esq., Solicitor and of counsel for plaintiff, IT IS HEREBY ORDERED that an appeal to the Circuit Court of Appeals for the Ninth Circuit from the decree heretofore filed and entered herein, be, and the same is hereby allowed, and that a certified transcript of the record, testimony, exhibits, stipulations and all proceedings be forthwith transmitted to said Circuit Court of Appeals for the Ninth Circuit.

It is further ordered that the bond for costs on appeal be fixed at the sum of Two Hundred (\$200.00) Dollars.

Dated, January 15th, 1924.

FRANK H. RUDKIN,  
Judge.

[Endorsed]: Filed Jan. 15, 1924. Walter B. Maling, Clerk. By J. A. Schaertzer, Deputy Clerk.  
[351]

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(Premium charged for this bond is \$5.00 per annum.)

(BOND ON APPEAL.)

KNOW ALL MEN BY THESE PRESENTS, That we, Cooling Tower Company, Inc., a corporation, as principal, and United States Fidelity and Guaranty Company, as surety, are held and firmly bound unto C. F. Braun & Co., a corporation in



the full and just sum of two hundred dollars, to be paid to the said C. F. Braun & Co., its certain attorney, executors, administrators or assigns; to which payment, well and truly to be made, we bind ourselves, our heirs, executors and administrators, jointly and severally, by these presents.

Sealed with our seals and dated this 20th day of February in the year of our Lord one thousand nine hundred and twenty-four.

WHEREAS, lately at a District Court of the United States for the Southern Division of the Northern District of California, Second Division, in a suit depending in said court, between Cooling Tower Company, Inc., plaintiff, and C. F. Braun & Co., defendant, a decree was rendered against the said Cooling Tower Company, Inc., and the said Cooling Tower Company, Inc., having appealed from said decree to the Circuit Court of Appeals, for the Ninth Circuit having obtained from said Court to reverse the decree in the aforesaid suit, and a citation directed to the said C. F. Braun & Co., having been issued citing and admonishing it to be and appear at a United States Circuit Court of Appeals for the Ninth Circuit, to be holden at San Francisco, in the State of California.

NOW, THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, That if the said Cooling Tower Company, Inc., shall prosecute its said appeal to effect, and answer all damages and costs if it fail to make its plea good, then the above

obligation to be void; else to remain in full force and virtue.

THE COOLING TOWER CO., INC. (Seal)

A. B. TAPPEN, (Seal)

Principal.

UNITED STATES FIDELITY & GUAR-  
ANTY CO. (Seal)

By HENRY V. D. JOHNS, (Seal)

Attorney-in-fact.

By ERNEST W. SWINGLEY,

Attorney-in-fact.

Acknowledged before me the day and year first above written.

[Seal]

JOSEPH H. TAYLOR,

Notary Public, Westchester Co., N. Y. Co. Clerk's

No. 161. N. Y. Co. Register's No. 5151.

Commission expires March 30, 1925. [352]

Form of bond and sufficiency of sureties approved.

JOHN S. PARTRIDGE,

Judge.

[Endorsed]: Filed Feb. 26, 1924. Walter B. Maling, Clerk. [353]

In the Southern Division of the United States District Court, for the Northern District of California, Second Division.

IN EQUITY—No. 923.

COOLING TOWER COMPANY, INC. (a Corporation),

Plaintiff,

vs.

C. F. BRAUN & CO. (a Corporation),

Defendant.

#### ASSIGNMENT OF ERRORS.

Now comes C. F. Braun & Co., defendant in the above cause in the court below, and appellant herein, by Chas. E. Townsend, Esq., its solicitor and counsel, and says that in the record and proceedings in the said cause in the said court below there is manifest error, and it particularly specifies as the errors upon which it will rely and which it will urge upon its appeal in the above-entitled cause:

(1) That the District Court of the United States for the Northern District of California, Second Division erred in dismissing the counterclaim of defendant on Braun patent No. 1,442,784.

(2) That the District Court of the United States for the Northern District of California, Second Division, erred in finding that said Braun patent No. 1,442,784 does not involve novelty.

(3) That the District Court of the United States for the Northern District of California, Second Division, erred in finding that said Braun patent No. 1,442,784 does appear to be [354] anticipated by the prior patents.

(4) That the District Court of the United States for the Northern District of California, Second Division, erred in failing to find letters patent No. 1,442,784 valid and infringed.

(5) That the District Court of the United States for the Northern District of California, Second Division, erred in failing to grant injunction restraining the further infringement of letters patent No. 1,442,784.

(6) That the District Court of the United States for the Northern District of California, Second Division, erred in failing to find that defendant-appellant was entitled to accounting for damages and profits for infringement of letters patent No. 1,442,784.

In order that the foregoing assignment of errors may be and appear of record, the defendant presents the same to the Court, and prays that such disposition be made thereof as in accordance with the law and statutes of the United States in such cases made and provided.

All of which is respectfully submitted.

CHAS. E. TOWNSEND.

Solicitor for Defendant.

Dated: January 15th, 1924. [355]



In the Southern Division of the United States  
District Court for the Northern District of  
California, Second Division.

IN EQUITY—No. 923.

COOLING TOWER COMPANY, INC. (a Cor-  
poration).

Plaintiff,

vs.

C. F. BRAUN & CO. (a Corporation),

Defendant.

PETITION FOR ORDER ALLOWING APPEAL.

To the Honorable Court, Above Entitled:

The above-named defendant, C. F. Braun & Co., conceiving itself aggrieved by the decree filed and entered on the 17th day of December, 1923, in the above-entitled cause, does hereby appeal therefrom to the United States Circuit Court of Appeals, for the Ninth Judicial Circuit for the reasons and upon the grounds specified in the assignment of errors, which is filed herewith, and prays that this appeal may be allowed, that a citation issue as provided by law, and that a transcript of the record, proceedings, exhibits and papers, upon which said decree was made and entered as afore-said, duly authenticated, may be sent to the Circuit Court of Appeals for the Ninth Circuit, sitting at San Francisco.

And your petitioner further prays that an order be made fixing the amount of security which the

defendant, C. F. Braun & Co., shall give and furnish upon such appeal, and that the transcript of evidence, taken in open court, on final hearing be ordered written up and be taxed as costs.

Dated: Jan. 15, 1924.

CHAS. E. TOWNSEND,  
Solicitor for Defendant. [356]

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In the Southern Division of the United States  
District Court for the Northern District of  
California, Second Division.

IN EQUITY—No. 923.

COOLING TOWER COMPANY, INC. (a Cor-  
poration),

Plaintiff,

vs.

C. F. BRAUN & CO. (a Corporation),

Defendant.

ORDER ALLOWING APPEAL.

The foregoing petition for appeal is allowed upon the petitioners filing a bond in the sum of Two Hundred Fifty (\$250.00) Dollars, with sufficient sureties, to be conditioned as required by law.

And it is further ordered that the transcript of evidence taken in open court on final hearing

be written up and that the expense of such transcript be taxed as costs.

FRANK H. RUDKIN,  
Judge.

Dated: Jan. 15, 1924. [357]

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In the Southern Division of the United States  
District Court for the Northern District of  
California, Second Division.

IN EQUITY—No. 923.

COOLING TOWER COMPANY, INC. (a Cor-  
poration),

Plaintiff,

vs.

C. F. BRAUN & CO. (a Corporation),

Defendant.

ORDER ALLOWING WITHDRAWAL OF ORI-  
GINAL EXHIBITS.

On motion of Chas. E. Townsend, Esq., solicitor for defendant, and good cause appearing therefor, it is by the Court now ordered:

That all exhibits in the above-entitled case, both plaintiff's exhibits and defendant's exhibits, including models, drawings, copies of patents, books and printed publications, and which are impracticable to have copied or duplicated, be, and they are hereby allowed to be withdrawn from the files of this court in said case and transmitted by the Clerk of this court to the United States Circuit

Court of Appeals for the Ninth Circuit as a part of the record upon appeal for the defendant herein to the said Circuit Court of Appeals; said original exhibits to be returned to the files of this court upon the determination of said appeal by said Circuit Court of Appeals.

FRANK H. RUDKIN,  
Judge.

Dated: Jan. 15, 1924.

[Endorsed]: Filed Jan. 15, 1924. Walter B. Maling, Clerk. By J. A. Schaertzer, Deputy Clerk. [358]

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The premium charged for this bond is \$10.00 Dollars per annum.

In the Southern Division of the United States District Court for the Northern District of California, Second Division.

IN EQUITY—No. 923.

COOLING TOWER COMPANY, INC. (a Corporation),

Plaintiff,

vs.

C. F. BRAUN & CO. (a Corporation),

Defendant.

BOND ON APPEAL.

KNOW ALL MEN BY THESE PRESENTS:  
That we, C. F. Braun & Co., a California corpora-



tion, as principal, and the Fidelity and Deposit Co. of Maryland, a corporation, created, organized and existing under and by virtue of the laws of the State of Maryland, as surety, are held and firmly bound unto the above-named appellee, Cooling Tower Company, Inc., a Corporation, in the sum of Two Hundred Fifty (\$250.00) Dollars, in lawful money of the United States of America, for the payment of which well and truly to be made unto the said appellee, its successors and assigns, we bind ourselves, our successors and assigns, jointly and severally, firmly by these presents, conditioned that

WHEREAS, on the 17th day of December, 1923, in the Southern Division of the United States District Court for the Northern District of California, Second Division, in a suit pending in that court, wherein C. F. Braun & Co. was the defendant and said Cooling Tower Company, Inc., was [359] the plaintiff, numbered on the Equity Docket as 923, a decree was rendered, which in part was against the said C. F. Braun & Co., and

WHEREAS, said C. F. Braun & Co., having obtained an appeal to the United States Circuit Court of Appeals for the Ninth Circuit, to reverse a portion of the said decree, which said decree was entered in the United States District Court on the 17th day of December, 1923, and an appeal allowed, and citation directed to the said appellee, citing and admonishing it to be and appear at a session of the United States Circuit Court of Appeals for the Ninth Circuit.

NOW, THEREFORE, the condition of this obligation is such that if the above-named appellant shall prosecute said appeal to effect and answer all costs, if it fails to make its plea good, then the above obligation to be void; else to remain in full force and virtue.

C. F. BRAUN & CO.,

By C. F. BRAUN, (Corporate Seal)

President.

FIDELITY AND DEPOSIT CO. OF MD.,

By EDGAR H. BENNETT, (Corporate Seal)

Surety.

Attorney-in-fact.

E. R. McCORNING,

Agent.

Dated: Feb. 15, 1924.

Approved:

JOHN S. PARTRIDGE,

Judge.

[Endorsed]: Filed Feb. 15, 1924. Walter B. Maling, Clerk. By J. A. Schaertzer, Deputy Clerk.

[360]

In the Southern Division of the United States  
District Court for the Northern District of  
California, Second Division.

IN EQUITY—No. 923.

COOLING TOWER COMPANY, INC. (a Cor-  
poration),

Plaintiff,

vs.

C. F. BRAUN & CO. (a Corporation),

Defendant.

STIPULATION RE PRINTING AND COSTS ON  
APPEAL.

IT IS HEREBY STIPULATED by and between the parties hereto, subject to the approval of the Court, that on the appeal and cross-appeal of this cause to the Circuit Court of Appeals, for the Ninth Circuit, one record only including the transcript of the evidence on final hearing in the District Court and appeal papers, etc., of both parties, need be printed, and that all items taxable as costs on the appeal of this cause, including the Official Court Reporter's fees and costs of transcribing the testimony on final hearing and certifying the record in the District Court, and the printing of the record on appeal as aforesaid, and fees in the Circuit Court of Appeals, shall be paid in equal shares by the parties hereto and at the times when due, said amounts so to be taxed as costs and paid accordingly as the order of the

Court of Appeals shall determine that costs shall be taxed.

EDWARD A. O'BRIEN,  
Solicitor for Plaintiff,  
CHAS. E. TOWNSEND,  
Solicitor for Defendant.

Dated: January 31, 1924.

So ordered:

JOHN S. PARTRIDGE,  
Judge.

[Endorsed]: Filed Jan. 31, 1924. Walter B. Maling, Clerk. By J. A. Schaertzer, Deputy Clerk. [361]

---

In the Southern Division of the United States District Court for the Northern District of California, Second Division.

IN EQUITY—No. 923.

COOLING TOWER COMPANY, INC. (a Corporation),

Plaintiff,

vs.

C. F. BRAUN & CO. (a Corporation),

Defendant.

STIPULATED PRAECIPE FOR TRANSCRIPT  
ON APPEAL.

(Superseding Praecipe for Transcript on Appeal  
Heretofore Filed by Either Party.)

To the Clerk of the United States District Court:  
Please incorporate, in accordance with this stipu-



lation of the parties, the following papers, documents and exhibits in the transcript of record on appeal in the above-entitled cause, omitting title of cause and omitting copying of all documentary exhibits, and transmitting one combined record only as per stipulation of the parties dated January 31, 1924. This stipulated Praecipe supersedes Praecipe for Transcript on Appeal heretofore filed by either party:

- (1) Bill of complaint.
- (2) Answer of defendant, including setoff, counterclaim and cross-complaint.
- (3) Reply of plaintiff to setoff, counterclaim and cross-complaint.
- (4) Memo opinion of District Judge Partridge.
- (5) Interlocutory decree dated December 17, 1923.
- (6) Perpetual injunction.
- (7) Transcript of the entire record of all proceedings, and testimony in full, in the exact words of the witnesses, including depositions.
- (8) All exhibits in the case.
- (9) Plaintiff's petition for order allowing appeal.  
[362]
- (10) Defendant's petition for order allowing appeal.
- (11) Plaintiff's assignment of errors.
- (12) Defendant's assignment of errors.
- (13) Order allowing appeal of plaintiff.
- (14) Order allowing appeal of defendant.

- (15) Order allowing withdrawal of original exhibits.
- (16) Bond on appeal of plaintiff.
- (17) Bond on appeal of defendant.
- (18) Stipulation re printing and costs on appeal, filed January 31, 1924.
- (19) Stipulation praecipe for transcript upon appeal.
- (20) Citation to plaintiff.
- (21) Citation to defendant.

Dated: February 14, 1924.

EDWARD A. O'BRIEN,  
Solicitor for Plaintiff.  
CHAS. E. TOWNSEND,  
Solicitor for Defendant.

Approved:

JOHN S. PARTRIDGE,  
Judge.

[Endorsed]: Filed Feb. 14, 1924. Walter B. Maling, Clerk. [363]

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CERTIFICATE OF CLERK U. S. DISTRICT COURT TO TRANSCRIPT OF RECORD.

I, Walter B. Maling, Clerk of the District Court of the United States, in and for the Northern District of California, do hereby certify the foregoing three hundred sixty-three (363) pages, numbered from 1 to 363, inclusive, to be a full, true and cor-



allowing an appeal, of record in the Clerk's Office of the United States District Court for the Northern District of California, wherein Cooling Tower Company, Inc., a corporation, is appellant, and you are appellee, to show cause, if any there be, why the decree rendered against the said appellant, as in the said order allowing appeal mentioned, should not be corrected, and why speedy justice should not be done to the parties in that behalf.

WITNESS, the Honorable FRANK H. RUDKIN, United States Circuit Judge for the 9th Circuit, this 15th day of February, A. D. 1924.

FRANK H. RUDKIN,  
United States Circuit Judge.

Service of the within citation admitted this 15th day of February, 1924.

CHAS. E. TOWNSEND,  
Solicitor for Defendant-Appellant.

[Endorsed]: No. 923. United States District Court for the Northern District of California. Cooling Tower Company, Inc., a Corporation, Appellant, vs. C. F. Braun and Company, a Corporation. Citation on Appeal. Filed Feb. 15, 1924. Walter B. Maling, Clerk. By J. A. Schaertzer, Deputy Clerk. [365]



CITATION (COOLING TOWER COMPANY,  
INC.).

UNITED STATES OF AMERICA,—ss.

The President of the United States, to Cooling  
Tower Company, Inc. (a Corporation),  
GREETING:

You are hereby cited and admonished to be and  
appear at a United States Circuit Court of Ap-  
peals for the Ninth Circuit, to be holden at the  
city of San Francisco, in the State of California,  
within thirty days from the date hereof, pursuant  
to an order allowing an appeal, of record in the  
clerk's office of the United States District Court for  
the Northern District of California (Southern Di-  
vision), wherein C. F. Braun & Co. (a Corpora-  
tion), is appellant, and you are appellee, to show  
cause, if any there be, why the decree rendered  
against the said appellant, as in the said order al-  
lowing appeal mentioned, should not be corrected,  
and why speedy justice should not be done to the  
parties in that behalf.

WITNESS, the Honorable JOHN S. PAR-  
TRIDGE, United States District Judge for the  
Northern District of California, this 15th day of  
February, A. D. 1924.

JOHN S. PARTRIDGE,  
United States District Judge.

Service of the within citation on appeal admitted  
this 15th day of February, 1924.

EDWARD A. O'BRIEN,  
Solicitor for Plaintiff-Appellee.

[Endorsed]: In Equity—No. 923. United States District Court for the Northern District of California (So. Division). C. F. Braun & Co. (a Corporation), Appellant, vs. Cooling Tower Company, Inc. (a Corporation), Appellee. Citation on Appeal. Filed Feb. 15, 1924. Walter B. Maling, Clerk. By J. A. Schaertzer, Deputy Clerk. [366]

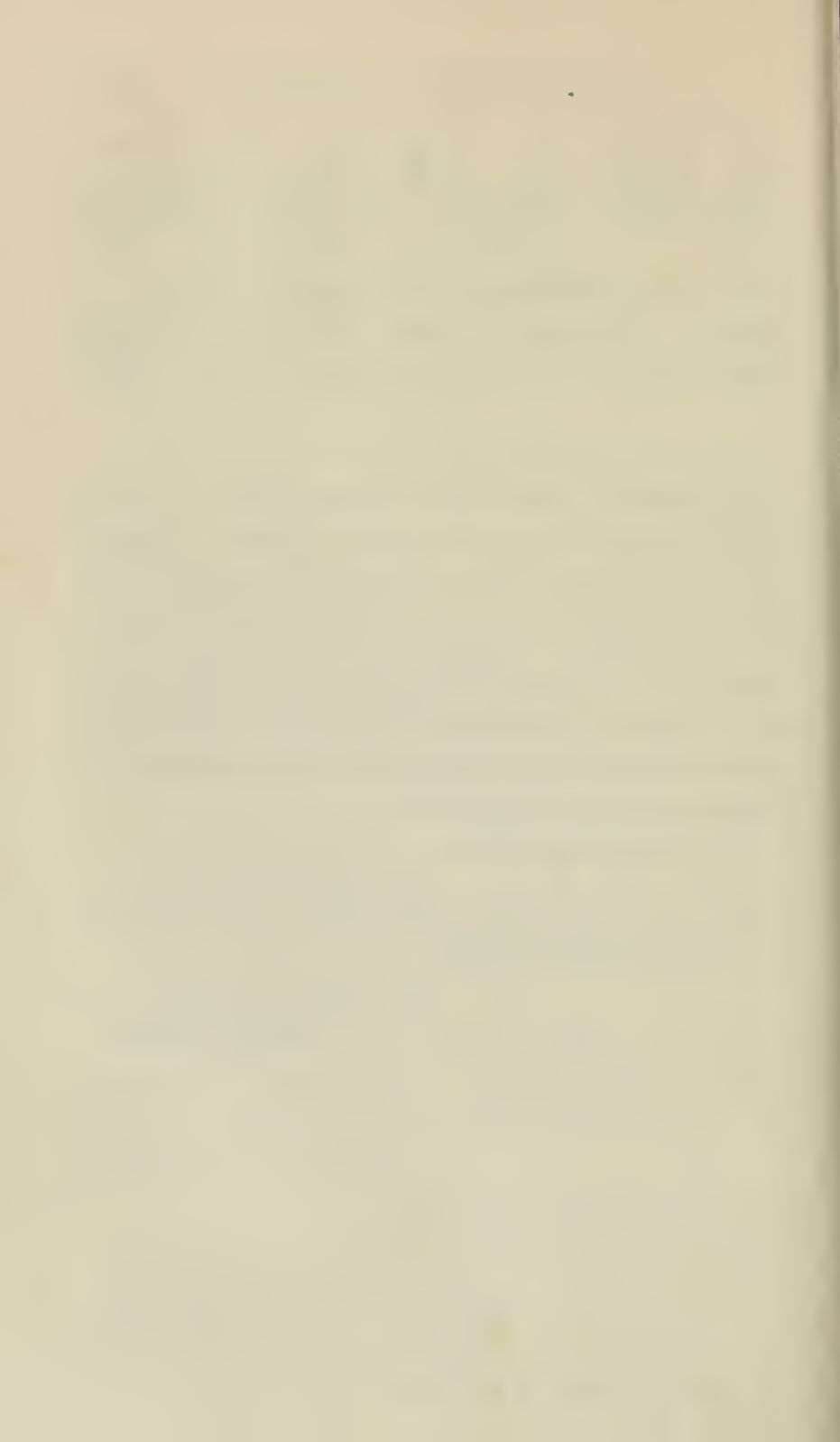
---

[Endorsed]: No. 4221. United States Circuit Court of Appeals for the Ninth Circuit. Cooling Tower Company, Inc., a Corporation, Appellant, and Cross-appellee, vs. C. F. Braun & Company, a Corporation, Appellee and Cross-appellant. Transcript of Record. Upon Appeal and Cross-appeal from the Southern Division of the United States District Court for the Northern District of California, Second Division.

Filed March 14, 1924.

F. D. MONCKTON,  
Clerk of the United States Circuit Court of Appeals  
for the Ninth Circuit.

By Paul P. O'Brien,  
Deputy Clerk.



No. 4221

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United States  
Circuit Court of Appeals

For the Ninth Circuit.

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COOLING TOWER COMPANY, INC., a Corporation,

Appellant and Cross-Appellee,

vs.

C. F. BRAUN & COMPANY, a Corporation,

Appellee and Cross-Appellant.

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**BOOK OF EXHIBITS**

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Upon Appeal and Cross-Appeal from the Southern  
Division of the United States District Court  
for the Northern District of California,  
Second Division.

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## INDEX TO BOOK OF EXHIBITS.

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	Page
Affidavit of Charles Moser .....	86

### EXHIBITS:

Defendant's Exhibit "DD"—File-wrapper and Contents of Letters Patent No. 1,010,020, Issued to Barton H. Coffey for Improvement in Devices for Cooling Liquids .....	53
Defendant's Exhibit "N"—File-wrapper and Contents of Letters Patent No. 1,442,784, Issued to Carl F. Braun for Improvement in Water Cooling Towers .....	1



DEFENDANT'S EXHIBIT "N."

[Endorsed]: No. 923. U. S. Dist. Court, Nor. Dist. Calif. Deft. Exhibit "N." Filed 11/28/23. Maling, Clerk.

No. 4221. United States Circuit Court of Appeals for the Ninth Circuit. Filed Mar. 18, 1924. F. D. Monekton, Clerk.

2—390

DEPARTMENT OF THE INTERIOR,  
UNITED STATES PATENT OFFICE.

To all persons to whom these presents shall come,  
GREETING:

THIS IS TO CERTIFY that the annexed is a true copy from the records of this office of the File-wrapper and Contents, in the matter of the

Letters Patent of

Carl F. Braun,

Number 1,442,784,            Granted January 16, 1923,  
for

Improvement in Water Cooling Towers.

IN TESTIMONY WHEREOF, I have hereunto set my hand and caused the seal of the Patent Office to be affixed at the City of Washington, this 6th day of June, in the year of our Lord, one thousand nine hundred and twenty-three and of the Independence of the United States of America the one hundred and forty-seventh.

[Seal]

WM. A. KINNAN,  
Acting Commissioner of Patents.



1920,

NUMBER (Series of 1915),

377277.

(EX'R'S BOOK) 215-8.

DIV. 32.

Patent

No. 1442784.

Jan. 16, 1923.

Name—Carl F. Braun,

of—San Francisco,

County of

State of—California,

Invention—Water Cooling Towers,

No. . . . ., filed . . . . ., 191. . . . ., PARTS OF APPLICATION FILED.

	Original		Renewed
Petition	April 28, 1920		, 192
Affidavit	“ “, 1920		, 192
Specification	“ “, 1920		, 192
Drawing 2 lots	“ “, 1920		, 192
Photo Copy	, 192		, 192
First Fee Cash \$15	Apr. 28, 1920		, 192
“ “ Cert.	, 192		, 192
Appl. filed complete,	Apr. 28, 1920		, 192
Examined and Passed for Issue . . . .			
	Dec. 6, 1922		, 192
Jay F. Bancroft, Exr. Div. 32		Exr. Div.—	
Notice of Allowance	December 6, 1922		, 192
	By Commissioner.		
	By Commissioner.		
Final Fee Cash \$20	Dec. 21, 1922		, 192
“ “ Cert.	, 192		, 192

Patented—Jan. 10, 1923.

Attorney—Charles E. Townsend, Crocker Bldg., San  
Francisco, Cal.

Associate Attorney

(No. of Claims Allowed—12. Print Claim 2 in O.  
(G. Cl. 261-114).

Title as Allowed—Water Cooling Tower.

\$15 Rec'd.

April 28, 1920.

C. C. U. S. Patent Office.

U. S. Patent Office,

May 1-1920.

Division XXXII.

Serial No. 377277. Paper No. 1.  
Application.

Filed Apr. 28, 1920.

PETITION.

11306.

To the Commissioner of Patents:

Your Petitioner, CARL F. BRAUN, a Citizen of the United States and resident of City and County of San Francisco, and State of California, whose Post Office address is Atlas Building, prays that Letters Patent may be granted to him for the improvement in WATER COOLING TOWERS, set forth in the annexed specification; and he hereby appoints CHAS. E. TOWNSEND, whose register number is 6556, of San Francisco, California, and whose address is 911-917 Crocker Building, San Francisco, California, his Attorney, with full power of substitution and revocation to prosecute this application, to make alterations and amendments therein, to receive the Patent, and to

transact all business in the Patent Office connected therewith.

Signed at San Francisco, in the County of San Francisco and State of California, this 15th day of April, 1920.

In signing, the first or given name  
should be written in full.

CARL F. BRAUN.

[Twenty-five cents U. S. Internal Revenue stamp attached. Cancelled.]

### Specification

To all whom it may concern:

Be it known that I, CARL F. BRAUN, a citizen of the United States, residing at city and county of San Francisco, and State of California, have invented a new and useful Improvement in Water-Cooling Towers, of which the following is a specification.

377277—1

11307

This invention relates to water cooling towers.

It is the principal object of the present invention to provide a water-cooling tower of the atmospheric type which is of simple construction and so designed as to be formed from composite units formed at the plant and adapted to be readily assembled at the point of installation, thereby insuring that the erection process may be rapidly carried on and that the cooling tower when finished will be of a predetermined standard design.

The present invention contemplates the use of a main frame and a plurality of side and corner

units adapted to be assembled relative to the main frame in a manner to produce a cooling tower of any predetermined capacity.

The invention is illustrated in the accompanying drawings, in which:

Figure 1 is a view in side elevation showing a tower of the present construction with parts broken away to more clearly show the structural details.

Fig. 2 is a view in plan showing the completely assembled tower.

Fig. 3 is an enlarged view in section through the feed and distributing troughs as seen on the line 3—3 of Fig. 2.

Fig. 4 is a view in elevation showing one of the corner units.

Fig. 5 is a view in elevation showing one of the side units.

377277—2

11308

concerned

The present invention is particularly  $\Lambda$  with a cooling tower of the general type shown in my patent, No. 1,334,515, issued March 23, 1920, and entitled "Water Cooling Tower." In that patent however, the cooling tower is gradually built up from slat and frame members while in the present instance the frame is originally built, thereafter the louvres are formed from corner and side louvre sections built at the manufacturing plant and assembled at the erection locality.



In the drawings, 10 indicates vertical corner posts  
 vertical members  
 forming the  $\Lambda$  frame  $\Lambda$  structure upon which horizontal frame members 11 are supported. The corner posts and frame members are here indicated as being formed of wood. Suitable diagonal braces

bracing  $\Lambda$  pins 12 are used to secure the corner posts in rigid relation to each other while the horizontal frame members 11 are adapted to cross each other at the posts and to be secured thereto. Attention is directed to the fact that the horizontal members project a considerable distance from the vertical faces of the posts, thus forming out bearing supports for the louvres 13. These louvres are of composite construction and comprise side louvre sections 14, and corner sections 15. Each of the sections consists of grooved end rails 16 into which the opposite ends of the louvre boards 17 project. It is preferable that the louvre boards shall overlap each other at their joints, thereby providing a substantially water tight wall which will prevent leakage of the water in the cooling tower and also shield the central portion of the tower from the action of wind. The louvre walls extend upwardly and outwardly at angles of substantially  $45^\circ$  while the sections are bolted by their lower edges to the horizontal frame members 11 at points near the posts 10 and by their upper edges to the outer ends of the horizontal frame members, thus being sup-

11309

ported in their inclined positions. In this manner the upper edges of the louvre walls will conceal the lower edges of the super adjacent walls, thus forming a complete wind break while permitting free circulation of air between the various walls. In the drawings the cooling tower is formed from single sections 14 and 15, the sections 14 being secured along the sides of the tower and between the horizontal frame members while the sections 15 are secured diagonally across the corners of the tower and between the projections of the horizontal frame members crossing at the posts. If the length of section 14 is excessively great intermediate boards 18 may be used to secure the various louvre boards 17 in position and prevent them from sliding or sagging.

Mounted upon the horizontal frame sections and within the area defined by these sections and the corner posts are a plurality of superimposed decks. The uppermost of these decks is a distributing deck 19 secured at the top of the frame and formed of a plurality of slats extending parallel to each other and disposed in spaced relation to each other. This construction is more completely disclosed in my patent as mentioned in the foregoing specification. A plurality of frame members beneath the distributing deck are cooling decks 20. These decks are formed in a similar manner to that of the distributing deck and are arranged with their slats extending in the same general direction as the intervals  
slats of the distributing deck. At  $\Delta$  ~~traverse~~

throughout the height of the tower redistributing decks 21 are provided. The redistributing decks are also formed in the manner previously described while their slats lie at right angles to the slats of the cooling decks. This will permit the proper overflow of the water onto the various cooling decks and will further insure that the water will be redistributed to be uniformly apportioned to the

377277—4

11310

various decks, even though the tower is in operation in a high wind.

The delivery and initial distribution of the water is made from a main launder 22 which is supported above the first distributing deck 19 and is formed as shown in Fig. 3. This launder comprises a plurality of longitudinally extending boards 23 which are tongued and grooved to form a substantially water tight trough. These launder boards are held together by frame members 24. The frames are formed with a substantially accurate semi-circular seat adapted to conform to the outer curved faces of the boards and to provide a support for the boards when they are secured in position by the clamping bars 25. Final delivery of water from the main launder to the distributing deck troughs

is brought about through the lateral ~~launders~~ 26. These members are preferably formed of cast metal and interlock with the frames 24 while communicating with the main launder. The troughs are secured by their outer ends to the horizontal

frame members while their inner ends are detachably secured to the frames 24. This is brought about by flanges 27 extending from the sides of the troughs 26 and adapted to slide into guides 28 cast integral with the frames 24. The ends of the troughs upon which the flanges are secured are opened and therefore communicate with the openings 29 through the frame members 24 and the boards of the launders. The guides 28 are diagonally disposed as well as the flanges 27 received thereby.

In assembly and operation of the present invention the specifications of the cooling tower are first determined and then the posts and horizontal frame members are cut. The various decks slats are also cut. The louvre sections 14 and 15 are cut and assembled to form the units shown in Figs 4

377277—5

11311

and 5. The material in this condition is then shipped to the point of assembly where the corner posts are erected and the horizontal frame members

as

A secured thereto and clearly shown in Fig 1 of the drawings. The various deck slats are then secured in position by suitable deck clips after which the side and corner louvre sections are secured to the horizontal frame members in the diagonal positions shown in Fig. 1. The cooling tower thus constructed may then be placed in operation by delivering water to the main launder. This water may then flow out through the lateral troughs and overflow onto the slats in the distributing



deck. The water may then circulate down over the various cooling and redistributing decks. It will thus be seen that by the construction here provided a cooling tower may be completely formed at the point of manufacture and its louvre units assembled after which the assembled units and the cut material may be delivered to the point of erection when the units, the frame and the various decks may be readily assembled, thus eliminating several days time in the course of assembly and dispensing with the assistance of several days labor.

While I have shown the preferred form of my invention as now known to me, it will be understood that various changes in the construction, combination and arrangement of parts may be made by those skilled in the art without departing from the spirit of the invention as claimed.

377277—6



Having thus described my invention, what I claim and

desire to secure by Letters Patent, is: (10-56,1-2)

1. A water cooling tower comprising a main frame, a series of superimposed decks carried thereby and inclined louvre sections supported by the frame around said decks.

2. In a water cooling tower, a main frame, a pluralit. of superimposed perforated decks carried thereby and side and corner louvre sections adapted to be secured to the main frame around the decks to shield the same.

3. In a water cooling tower, a main frame comprising vertical corner posts, horizontal frame members carried thereby for the support of decks and unitary louvre sections adapted to be secured to said horizontal frame members.

4. In a water cooling tower, vertical section posts, horizontal frame members secured thereto and adapted to intersect

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deck. The water may then circulate down over the various cooling and redistributing decks. It will thus be seen that by the construction here provided a cooling tower may be completely formed

1 6. A cooling tower comprising an upright frame structure,  
2 ure, a plurality of superimposed cooling decks carried thereby  
3 and outwardly and upwardly flaring louvres secured around the  
4 frame in a protective position relative to said cooling decks,  
5 said louvres comprising assembled sections adapted to be secured  
6 to the frame to form a continuous louvre structure.

7  
8 *See P 3*  
9 7. A cooling tower comprising vertical corner posts, <sup>horizontal</sup>  
10 horizontal frame members supported from the corner posts and  
11 adapted to extend beyond the sides thereof <sup>to form</sup> forming a  
12 rectangular frame with overhanging ends and louvre sections  
13 supported in inclined positions between the various overhanging  
14 ends of the horizontal frame members.

15 8. In a cooling tower, a pair of horizontal corner posts  
16 pair of grooved end members and a plurality of louvre boards  
17 disposed with their ends seated within the grooves of said end  
18 members and adapted to combine to form a continuous wall

19 structure.

20  
*11-13-20*

deck. The water may then circulate down over the various cooling and redistributing decks. It will thus be seen that by the construction here provided a cooling tower may be completely formed

1 guide ways formed as a part of said frame, distributing troughs  
2 extending outwardly from the sides of the main trough, and means  
3 carried thereby for interlocking with the guide ways of the main  
4 frame and whereby the troughs will be held in communication with  
5 the openings through the frame and the side walls of the main  
6 trough.

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deck. The water may then circulate down over the various cooling and redistributing decks. It will thus be seen that by the construction here provided a cooling tower may be completely formed

In testimony whereof I have hereunto set my hand. ~~in the presence of two subscribing witnesses.~~  
In signing, the first or given name should be written in full.

CARL F. BRAUN.

11315

Two witnesses sign here.

.....

.....



OATH.

State of California,  
City and County of San Francisco,—ss.

Carl F. Braun, the above-named petitioner, being sworn (or affirmed), deposes and says that he is a citizen of the United States, and resident of City ~~in the~~ County of San Francisco, and State of California; that he verily believes himself to be the original first, and sole inventor of the improvements in WATER COOLING TOWERS, described and claimed in the annexed specification; that he does not know and does not believe that the same was ever known or used before his invention or discovery thereof, or patented or described in any printed publication in any country before his invention or discovery thereof, or more than two years prior to this application, or patented in any country foreign to the United States on an application filed more than twelve months before this application, or in public use or on sale in the United States for more than two years prior to this ap-

plication; and that no application for patent on said improvements has been filed by him or his representatives or assigns in any country foreign to the United States.

In signing, the first or given name should be written in full.

CARL F. BRAUN.


Subscribed and sworn to before me this 15th day of April, 1920.

[Notary Seal]

Notary Public sign here.

GRAN B. DUFFY,

Notary Public in and for the City and County of San Francisco, State of California.

 Oath or affirmation must be made before a Notary Public, WHO MUST AFFIX HIS SEAL ON THE GOLD WAFER. If Notary has no seal, a certificate of the Judge or Clerk of the Court, showing that the Notary is qualified, must be attached. If the oath is taken before a Justice of the Peace, a certificate of the Judge or Clerk of the Court, showing that such Justice is qualified, must be attached.

2-260

E. D.

Div. 32

Room 278

Paper No. 2.

Address only  
"The Commissioner of Patents,  
Washington, D. C.,"  
and not any official by name.

All communications respecting  
this application should give  
the serial number, date of  
filing, title of invention, and  
name of the applicant.

DEPARTMENT OF THE INTERIOR.

UNITED STATES PATENT OFFICE.

Washington.

Patent Office,

Jan. 15, 1921.

Mailed.

Jan. 15, 1921.

Charles E. Townsend,

Crocker Bldg.,

San Francisco, Calif.

Please find below a communication from the EXAMINER in charge of the application of Carl F. Braun, filed April 28, 1920, Ser. No. 377,277, for Water Cooling Towers.

R. F. WHITEHEAD.

Commissioner of Patents.

The section line "3-3," referred to in the brief description of Figure 3, is not found upon Figure 2.

Line 10 of page 2 is objectionable; the corner posts alone do not form the frame structures; members should be substituted for "structure" and vertical should be inserted before "frame." The term "Pins," as used in line 13 is inapt and should be eliminated, and "braeing" should be changed to braces. (The description in lines 22 and 23 is not in

accord with the drawings; the boards are not shown as overlapping in Figure 1.)

It is not understood what is meant by "At traverse" in line 24 of page 3. Explanation is requested.

Line 14 of page 4 is objectionable for the reason that there is no antecedent for "the lateral launders"; troughs should be substituted for "launders" to agree with lines 16 and 20. In line 22, "opened" should read open; and in line 24, "launders" should be iaunder.

In line 3 of page 5, as should be substituted for "and."

Claims 9 and 10 involve a separate and independent invention from claims 1 to 8, inclusive, being

377277—11

2

for a water distributing device which is applicable to other uses than that with a cooling tower and are examinable in another Division of this office under the class of Water Distribution as is shown in the following patents.

Burhorn, 1,182,635, May 9, 1916, 137-21.

Burhorn, 1,234,444, July 24, 1917, "

Claims 1 to 8 belong in Class 261 and are examinable in this division of the Office.

Division is therefore required between these two sets of claims. Because of this misjoinder of invention the claims are each rejected.

Attention is also called to the further state of the art shown in the following patents:



Schmidt,	693,625,	Feb. 18, 1902,	261-114
Hart	902,875,	Nov. 3, 1908,	261-113
Burhorn,	973,163,	Oct. 18, 1910,	261-108
Hart	1,228,207,	May 29, 1917,	261-114
M. B. G.			

JAY F. BANCROFT,  
Examiner.  
377277-12

U. S. Patent Office.

Aug. 9, 1921.

Division XXXII.

Mail Room.

Aug. 6, 1921.

U. S. Patent Office.

Div. 32, Room 278

Paper No. 3.

Serial No. 377277, Paper No. 3.

Amendment A.

Aug. 6, 1921.

DEPARTMENT OF THE INTERIOR.

UNITED STATES PATENT OFFICE.

In the Matter of the Application of CARL F.

BRAUN,—WATER COOLING TOWERS.

Filed April 28, 1920,

Serial No. 377,277.

San Francisco, Cal., July 30, 1921.

Hon. Commissioner of Patents,

Sir:

In response to official action of January 15, 1921,  
the above-entitled application is hereby amended as  

---

follows:

Page 2, line 10, before "frame" insert "vertical."

---

Same line, change "structure" to "members."

---

Same page, line 10, change "bracing" to "braces."

---

Line 13, cancel "pins."

---

Page 3, line 24, change "traverse" to "intervals."

---

Page 4, line 14, cancel "launders" and insert "troughs."

---

Line 22, change "opened" to "open."

---

Line 24, change "launders" to "laundry."

---

Page 5, line 3, change "and" to "as."

---

Cancel claims 9 and 10.

---

#### REMARKS.

In view of the requirement for division in this case, claims 9 and 10 have been cancelled, although it is to be understood that the subject matter of these claims is not abandoned by this action.

The specification has been amended as suggested by the examiner, and an order forwarded herewith for the application of a section line on the drawings as required.

377277—13

A full and complete action on the case is now requested.

Respectfully Submitted,  
CARL F. BRAUN,  
By CHAS. E. TOWNSEND,

Attorney.

377277—14

Mail Room.

Aug. 6, 1921.

U. S. Patent Office.

U. S. Patent Office.

Aug. 26, 1921.

Division XXXII.

Div. 32, Room 278.

Serial No. 377277, Paper No. 4.

Letter to Dftsm.

C

Aug. 6, 1921.

DEPARTMENT OF THE INTERIOR.

UNITED STATES PATENT OFFICE.

In the Matter of the Application of CARL F.  
BRAUN,—WATER COOLING TOWERS.

Filed April 28, 1920,

Serial No. 377,277.

San Francisco, Cal., July 30, 1921.

Hon. Commissioner of Patents,

Sir:

Please instruct the office draftsman to amend the drawing in the above case as indicated in red ink on the accompanying print, and charge the cost of same to Dewey, Strong & Townsend.

Respectfully,

CARL F. BRAUN,

By CHAS. E. TOWNSEND,

Attorney.

Account. Amdt. to Exr. No print incl'd.

Not approved. No print received.

J. F. B., Exr.

Aug. 18, 1921.

147923(FCH)

August 25, 1921.

Mr. Charles E. Townsend,  
Crocker Bldg.,  
San Francisco, Calif.

Sir:

In the Matter of the Application of C. F.  
Braun, Filed Apr. 28, 1920, for Water  
Cooling Towers, Serial No. 377,277.

Referring to your letter of the 30th ultimo, re-  
questing the Office to correct the drawing in the  
above-entitled application as indicated in red ink  
on the accompanying print, you are informed that  
no print was received with your letter.

Very respectfully,

---

  
Chief Clerk.

Per

377277—16

Patent Office,  
Sep. 19, 1921.  
Mailed.

MBG/D 2-260

Div. 32

Room 278

Paper No. 5

Address only

"The Commissioner of Patents,  
Washington, D. C.,"  
and not any official by name.

All communications respecting  
this application should give  
the serial number, date of  
filing, title of invention, and  
name of the applicant.

DEPARTMENT OF THE INTERIOR  
UNITED STATES PATENT OFFICE.

Washington.

Sept. 19, 1921.

Charles E. Townsend,  
Crocker Bldg.,  
San Francisco, Calif.

Please find below a communication from the EX-AMINER in charge of the application of Carl F. Braun, filed April 28, 1920, Ser. No. 377,277, for Water Cooling Towers.

THOMAS E. ROBERTSON,  
Commissioner of Patents.

Amendment of August 6, 1921, has been incorporated.

The drawings still await correction to obviate the objections made thereto in lines 1, 2, 8, 9 and 10 of the last official letter.

Claims 1, 2 and 3 are each rejected as failing to patentably distinguish from the patent to Hart, 1,228,207, of record.

The expression "in forming," in line 3 of claim 7, is objectionable and should be changed to read form.



Subject to such objection claims 4 to 8, inclusive, appear to be allowable as at present advised.

M. B. G.

JAY F. BANCROFT,

Examiner.

377277—17

Mail Room

Sept. 21, 1921.

U. S. Patent Office.

U. S. Patent Office.

Oct. 7, 1921.

Division XXXII.

Div. 32,

Room 278.

Serial No. 377,277, Paper No. 6.

Letter to Draftsm.

& B. Print.

Filed Sept. 21, 1921.

DEPARTMENT OF THE INTERIOR.

UNITED STATES PATENT OFFICE.

In the Matter of the Application of CARL F.  
BRAUN—WATER COOLING TOWERS.

Filed April 28, 1920.

Ser. No. 377,277.

San Francisco, Calif., September 16, 1921.

Hon. Commissioner of Patents,

Washington, D. C.

Sir:

Please instruct the office draftsman to amend the drawing in the above case as indicated in red ink

on the accompanying print, and charge the cost of same to Dewey, Strong, Townsend & ~~Loftus~~.

Respectfully,

CARL F. BRAUN.

By CHAS. E. TOWNSEND,

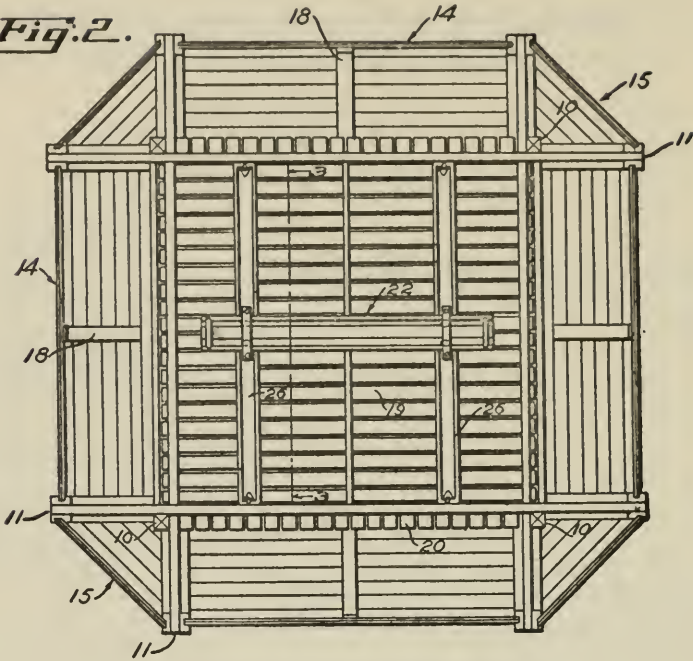
Attorney.

Print returned by drafting div.

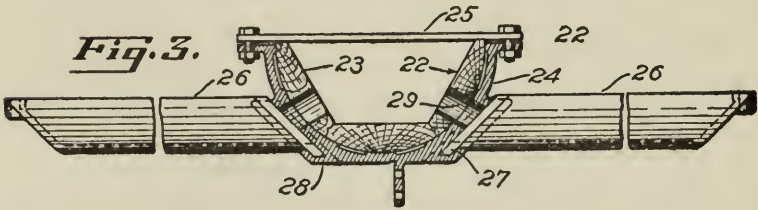
Enc.

377277—18

**Fig. 2.**



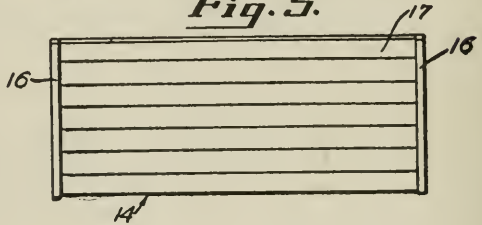
**Fig. 3.**



**Fig. 4.**



**Fig. 5.**



Patent Office,

Oct. 14, 1921.

Mailed.

Div. 32

Room 278

Paper No. 7

Address only

"The Commissioner of Patents,  
Washington, D. C.,"  
and not any official by name.

All communications respecting  
this application should give  
the serial number, date of  
filing, title of invention, and  
name of the applicant.

M. B. G. D.

2—260.

DEPARTMENT OF THE INTERIOR.

UNITED STATES PATENT OFFICE.

Washington.

Oct. 14, 1921.

Charles E. Townsend,

Crocker Bldg.,

San Francisco, Calif.

Please find below a communication from the EX-AMINER in charge of the application of Carl F. Braun, filed April 28, 1920, Ser. No. 377,277, for Water Cooling Towers.

THOMAS E. ROBERTSON,

Commissioner of Patents.

The drawing in this case has been corrected by the Official Draftsman in accordance with applicant's instructions filed September 21, 1921.

This case still awaits action upon applicant's part in response to Official letter of September 19, 1921.

M. B. G.

JAY F. BANCROFT,

Examiner.

377277—20

Div. 32, Room 278.

Paper No. 8.

G.

Oct. 14/21. L. Serial No. 377,277, Paper No. 8.

Amendment B.

Filed Dec. 27, 1921.

Patent Office.

Dec. 28, 1921.

Div. No. XXXII.

Mail Room.

Dec. 27, 1921.

U. S. Patent Office.

DEPARTMENT OF THE INTERIOR,  
IN THE UNITED STATES PATENT OFFICE.  
In the Matter of the Application of CARL F.  
BRAUN—WATER COOLING TOWER.

Filed April 28, 1920,

11316.

Serial No. 377,277.

San Francisco, Calif., Dec. 14, 1921.

Hon. Commissioner of Patents.

Washington, D. C.

Sir:

In response to the Office Actions of Sept. 19, 1921, and Oct. 14, 1921, the above-entitled application is hereby amended as follows:

Claims 1, 2 and 3, line 1 of each, before "water" insert —composite—.

Claim 1, line 2, change "decks" to —deck—, and insert —units— thereafter. Claim 1, line 3, cancel "sections" and insert —units—.

Claim 2, lines 2 and 4, change "decks" to —deck—, and insert —units— thereafter. Same claim, line 3, change "sections" to —units—.



Claim 3, line 2, change "corner" to —supporting—. Same claim, line 3, cancel "for the support" through to "sections" and insert/—deck units supported thereby in spaced superposed relation to each other and unitary louvers—.

Claim 4, line 1, change "corner" to —supporting—. Same claim, line 3, cancel "corner posts" and insert —corners of the tower—. Same claim, line 4, change "post" to —tower—.

Claim 5, line 2, cancel "corner posts" and insert —corners of the tower—. Same claim, line 4, change "post" to —tower—.

Claim 7, line 1, change "corner" to —frame—. Line 2, cancel "corner." Line 3, cancel "in forming" and insert —to form—.

1.

377277—21



the outermost posts to which they are secured, horizontal cooling decks supported upon said mem-

Add the following claims:

9. In a cooling tower structure a frame section ~~or~~ <sup>beam</sup>, comprising a plurality of vertical and horizontal members secured thereto, diagonal members carried thereby, said diagonal members supporting louvers.

10. In a composite cooling tower a plurality of frame sections comprising a pair of vertical posts carrying a plurality of spaced horizontal frame elements carried by said vertical members and overhanging the sides thereof, said elements serving as supports for horizontal cooling decks and diagonal louver panels.

11. A cooling tower structure comprising a plurality of <sup>vertical</sup> ~~horizontal~~ members, each formed of vertical supporting members, horizontally extending beams in superposed relation to each other and carried by the vertical members, said beams extending beyond the outermost vertical members, horizontal cooling decks carried on the beams and between the vertical members, and inclined louver panels secured by their upper ~~and~~ outer ends to the projecting ends of the horizontal beams and by their lower

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*Chas E*

*Chas E*

*Chas E*

*Chas E*

By CHAS. E. TOWNSEND,

His Attorney.

377277-23



11318

the outermost posts to which they are secured, horizontal cooling decks supported upon said members and between the posts, and diagonal ~~louver~~ panels secured by their upper ends and outer ends to the projecting ends of the horizontal members and secured at their lower and inner ends to the posts.

12. 44. In a cooling tower a louver unit comprising end members, and a plurality of ~~louver~~ boards disposed between said members and adapted to combine to form a continuous wall structure.

---

REMARKS.

Claims 1, 2 and 3 have been amended to emphasize the composite construction of applicant's tower. Heretofore in building cooling towers it has been common practice to cut the material at the point of erection. This has proven to be expensive, and for that reason applicant has provided a tower, sections of which are assembled in units, and which units may be readily connected to form a tower of the desired capacity. Claims 1, 2 and 3 are amended and submitted for reconsideration in view of the fact that the Hart invention does not contemplate such a structure. The newly added claims are undoubtedly patentable and further consideration of the case is now requested.

Respectfully submitted,

CARL F. BRAUN,

By CHAS. E. TOWNSEND,

His Attorney.



Mail Room.

Jul. 24, 1922.

U. S. Patent Office.

U. S. Patent Office.

Jul. 25, 1922.

Division XXXII.

Div. 32, Room 278.

Paper No. 10.

DEPARTMENT OF THE INTERIOR.

IN THE UNITED STATES PATENT OFFICE.

In the Matter of the Application of CARL F.

BRAUN—WATER—COOLING TOWERS.

Filed April 28, 1920,

Ser. No. 377,277.

11319

Serial No. 377,277 Paper No. 10.

Amendment C.

Filed July 24, 1922.

San Francisco, Calif., July 18, 1922.

Hon. Commissioner of Patents,

Washington, D. C.

Sir:

In response to the Office Action of April 4, 1922, the above-entitled application is hereby amended as follows:

Rewrite claims 1 and 2 as follows:

---

1. A water-cooling tower comprising a main frame formed by vertical posts carrying horizontally extending frame members, said frame members projecting beyond the ends of the posts, decks

per D ~~deck units~~ A adapted to be supported by the por-

tions of the frame members occurring between  
louvers

the posts and inclined louver units A supported by  
the outwardly projecting ends of said frame mem-  
bers.

2. A composite water-cooling tower comprising  
a main frame formed by vertical posts disposed  
in spaced relation to each other, horizontal frame  
members carried by the posts and forming super-  
posed rectangular supporting frames, said frame  
members intersecting each other at the posts and  
extending therebeyond, deck units adapted to be  
disposed upon the portions of the frame between  
the posts, and inclined louver units secured to the  
outwardly projecting ends of the frame members.

---

REMARKS.

Claims 1 and 2 have been amended in an effort to  
more clearly set forth the patentable differences  
between the reference to Hart and applicant's  
structure. It is now believed that these claims, as  
well as those previously allowed, are in condition

377277—26

1.

11320

for final allowance, which is requested.

The first paragraph of the Examiner's letter  
has been noted and an order is attached hereto  
requesting the drawing to be amended to show  
the overlapping arrangement of the boards.

Respectfully submitted,

CARL F. BRAUN,

By CHAS E. TOWNSEND,

His Attorney.

No Enclosures.

377277—27

U. S. Patent Office,

Oct. 18, 1922.

Mailed.

2—260.

Div. 32

Room 278

Paper No. 11

Address only

All communications respecting  
this application should give  
the serial number, date of  
filing, title of invention, and  
name of the applicant."The Commissioner of Patents,  
Washington, D. C.,"  
and not any official by name.

DEPARTMENT OF THE INTERIOR.  
UNITED STATES PATENT OFFICE.  
Washington.

Oct. 18, 1922.

Charles E. Townsend,

Crocker Bldg.,

San Francisco, Calif.,

Please find below a communication from the  
EXAMINER in charge of the application of Carl  
F. Braun, filed April 28, 1920. Ser. No. 377,277,  
for Water Cooling Towers.

THOMAS E. ROBERTSON,  
Commissioner of Patents.

Amendment of July 24, 1922, has been incor-  
porated.

Claims 1' and 2, presented by such amendment,  
appear to be allowable as at present advised.

Claims 3 to 8, inclusive, and claims 10 and 13  
stand allowed.

No response has been given to the objections to  
claims 9, 11, 12 and 14, in the second page of the  
last Official letter. Such objections are therefore  
repeated. When the objections have been over-  
come, and the drawings have been corrected as

proposed by applicant, these claims will be further considered upon their merits.

M. B. G.

JAY F. BANCROFT,

Examiner.

377277—28.

Application Room,

Nov. 24, 1922.

U. S. Patent Office.

Serial No. 377,277. Paper No. 12.

Amendment D.

Filed Nov. 24, 1922.

U. S. Patent Office,

Nov. 24, 1922.

Division XXXII.

Div. 32, Room 278,

Carl F. Braun,

Water Cooling Towers,

Filed April 28, 1920,

Serial No. 377,277.

Washington, D. C., November 22, 1922.

Honorable Commissioner of Patents,

Sir:—

In response to the official action of October 18, 1922, the above-entitled application is hereby amended as follows:

Claim 1, line 4, cancel "deck units" and insert —decks—; line 6, cancel "louver units" and insert —louvers—.

Claim 9, lines 1 and 2, cancel "or bent."

Claim 11, line 2, cancel "bents" and insert —sections—.

Claim 12, line 4, cancel "bents" and insert —sections—.

Claim 13, line 9, cancel "louver."

Claim 14, line 2, cancel "louver."

#### REMARKS.

The claims in this case have been amended, as suggested by the Examiner's letter, and it is now understood that the case is in condition for final action. The language of claim 1 has been slightly changed in order to set forth the fact that the specific frame structure is designed to carry decks and louvers, which in some cases might not be so called units. In view of the references of record it is believed that the claim as now amended should be allowed.

377277—29

It is understood from the Examiner's letter that the drawings are in course of correction and it is, therefore, believed that the entire case is now in condition to receive final action.

Respectfully submitted,

CHAS. E. TOWNSEND.

377277—30



Mail Room,  
Nov. 24, 1922.  
U. S. Patent Office.

Account.  
C.  
1 enc.

Serial No. 377,277. Paper No. 13.

Letter to Dftsman, & Blue Print. Filed Nov. 24,  
1922.

U. S. Patent Office.

Dec. 5, 1922.

Division XXXII.

Div. 32, Room 278,

Carl F. Braun,

Water Cooling Towers,

Filed April 28, 1920.

Serial No. 377,277.

Washington, D. C., November 24, 1922.

Honorable Commissioner of Patents,

Sir:

The Chief Draftsman is respectfully requested to correct the drawing in the above-entitled case, as indicated in red ink on the attached print, charging the cost of the same to the account of Dewey, Strong, Townsend & Loftus.

Respectfully,

CHAS. E. TOWNSEND,

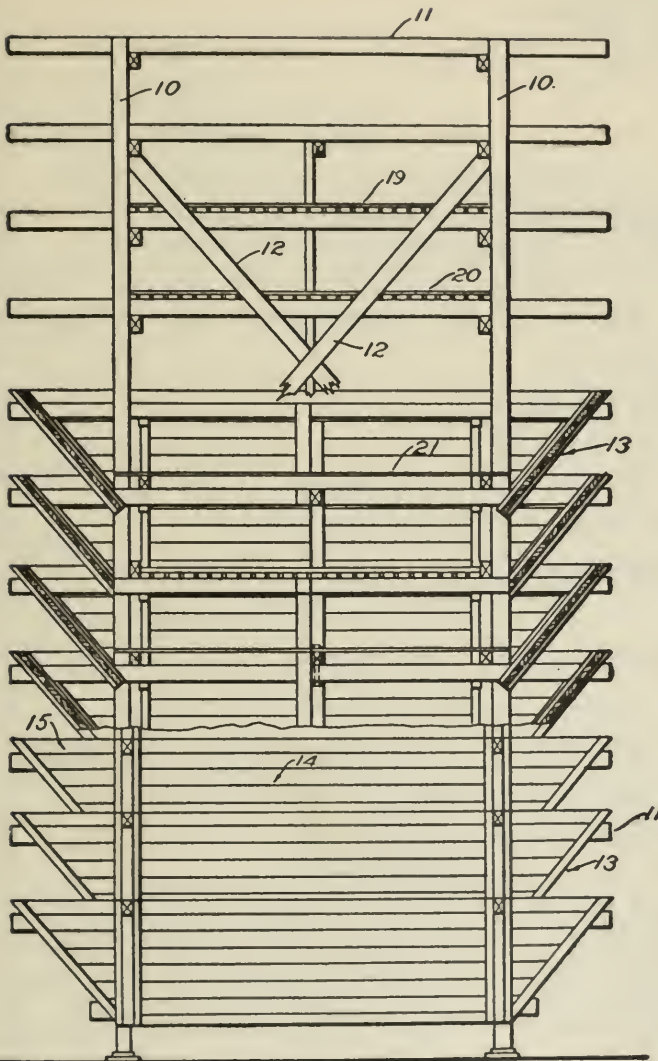
Attorneys for Applicant.

O. K.

M. B. G.

11/24/22.





**Fig. 1.**

INVENTOR  
CARL F. BRAUN.

BY  
*Chas. E. Townsend.*

ATTORNEY

U. S. Patent Office.

Dec. 6, 1922.

Division XXXII.

Serial No. 377,277, Paper No. 14.

Amendment E.

Filed December 6, 1922.

Washington, D. C., December 6, 1922.

DEPARTMENT OF THE INTERIOR.

IN THE UNITED STATES PATENT OFFICE.

In the Matter of the Application of CARL F.  
BRAUN.

Serial No. 377,277,

Filed April 28, 1920,

Entitled Water Cooling Towers.

Honorable Commissioner of Patents,

Washington, D. C.

Sir:

Supplemental to amendment of December 14,  
1922.

Cancel claims 9 and 12, renumbering the remain-  

---

ing claims in their order.

REMARKS:

After a personal interview with the Examiner, and in view of his rejection, the foregoing claims have been cancelled. It is understood that this places the case in condition for allowance which is requested.

Respectfully submitted,

CARL F. BRAUN.

By CHAS. E. TOWNSEND,

His Attorney.

Patent Office,  
Dec. 6, 1922.  
Mailed.

2—181

Serial No. 377,277

Address only.

"The Commissioner of Patents,  
Washington, D. C."

DEPARTMENT OF THE INTERIOR.  
UNITED STATES PATENT OFFICE.  
Washington.

Div. 32.  
DeC.

December Six, 1922.

Carl F. Braun,  
San Francisco, Calif.

Sir:

Your APPLICATION for a patent for an IMPROVEMENT in

Water Cooling Towers

filed April 28, 1920, has been examined and ALLOWED. (12 claims.)

The final fee, TWENTY DOLLARS, must be paid not later than SIX MONTHS from the date of this present notice of allowance. If the final fee be not paid within that period, the patent on this application will be withheld, unless renewed with an additional fee of \$20, under the provisions of Section 4897, Revised Statutes.

The office delivers patents upon the day of their date, and on which their term begins to run. The printing, photolithographing, and engrossing of the several patent parts, preparatory to final signing and sealing, will require about four weeks, and

Uncertified Checks Will Not Be Accepted.

In Remitting the Final Fee Give the Serial Number at the Head of This Notice.



such work will not be undertaken until after payment of the necessary fee.

When you send the final fee you will also send, **DISTINCTLY AND PLAINLY WRITTEN**, the name of the **INVENTOR**, **TITLE OF INVENTION**, **AND SERIAL NUMBER AS ABOVE GIVEN**, **DATE OF ALLOWANCE** (which is the date of this circular), **DATE OF FILING**, and, if assigned, the **NAMES OF THE ASSIGNEES**.

If you desire to have the patent issued to **ASSIGNEES**, an assignment containing a **REQUEST** to that effect, together with the **FEE** for recording the same, must be filed in this office on or before the date of payment of final fee.

After issue of the patent uncertified copies of the drawings and specifications may be purchased at the price of **TEN CENTS EACH**. The money should accompany the order. Postage stamps will not be received.

Final fees will **NOT** be received from other than the applicant, his assignee or attorney, or a party in interest as shown by the records of the Patent Office.

Respectfully,  
**THOMAS E. ROBERTSON**,  
Commissioner of Patents.

Charles E. Townsend,  
Crocker Bldg.,  
San Francisco, Calif.

2—103

---

\$20 received as the final fee in the application of C. F. Braun, Serial No. 377,277, for Water Cooling Tower, applied from a composite letter No. 220,347, received Dec. 21/22, from Dewey et al., which is on file in the Chief Clerk's room.

W. W. MORTIMER,  
Chief of Issue and Gazette Division.

377277—36

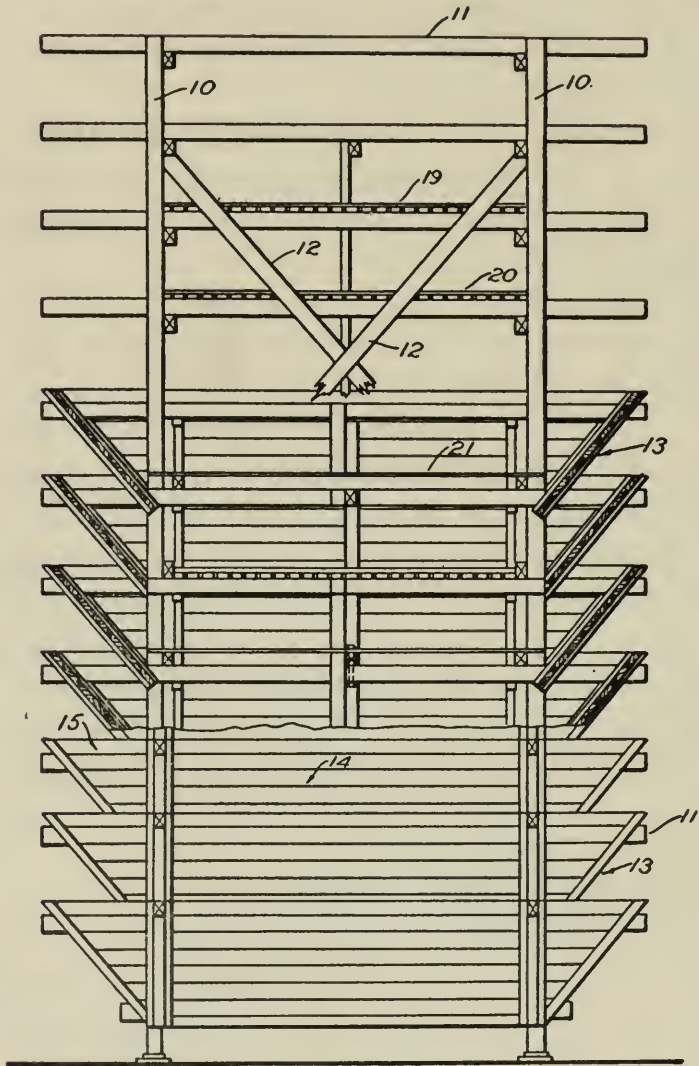
M. S.

Jan. 16, 1923.

1,442,784.

C. F. BRAUN.  
WATER COOLING TOWER.  
FILED APR. 28, 1920.

2 SHEETS—SHEET 1



**Fig. 1.**

INVENTOR  
CARL F. BRAUN.

BY *Chas. E. Fournant.*

ATTORNEY

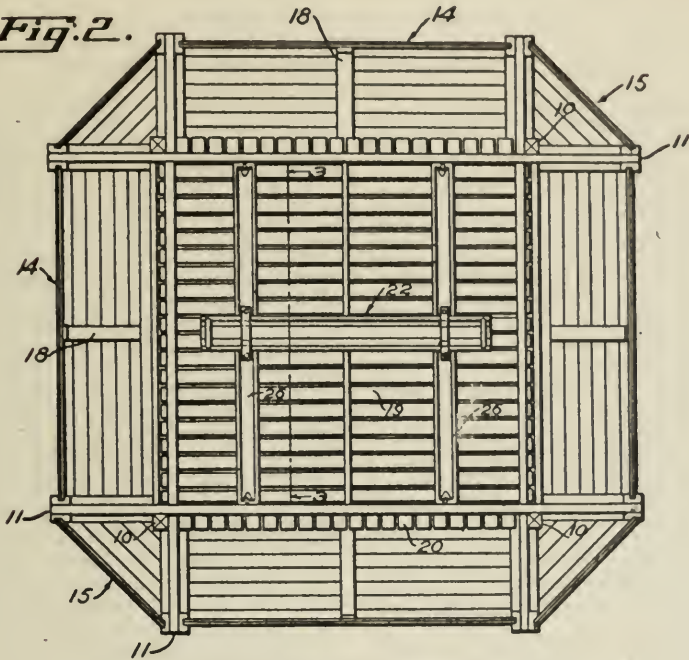
Jan. 16, 1923.

1,442,784.

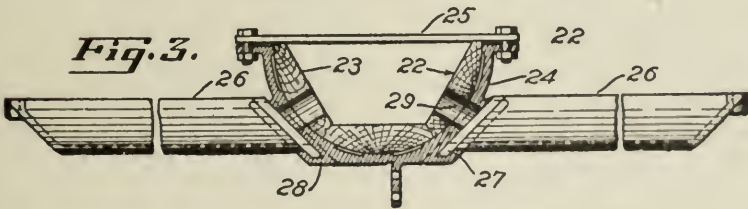
C. F. BRAUN.  
WATER COOLING TOWER.  
FILED APR. 28, 1920.

2 SHEETS—SHEET 2.

**Fig. 2.**



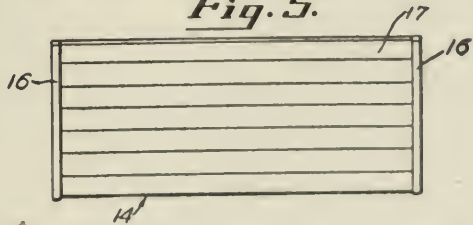
**Fig. 3.**



**Fig. 4.**



**Fig. 5.**



INVENTOR  
CARL F. BRAUN.

BY *Chas. E. Trumbull*

ATTORNEY



Patented Jan. 16, 1923.

1,442,784

## UNITED STATES PATENT OFFICE.

CARL F. BRAUN, OF SAN FRANCISCO, CALIFORNIA.

## WATER-COOLING TOWER.

Application filed April 28, 1920. Serial No. 377,277.

*To all whom it may concern:*

Be it known that I, CARL F. BRAUN, a citizen of the United States, residing at city and county of San Francisco and State of California, have invented a new and useful Improvement in Water-Cooling Towers, of which the following is a specification.

This invention relates to water cooling towers.

It is the principal object of the present invention to provide a water cooling tower of the atmospheric type which is of simple construction and so designed as to be formed from composite units formed at the plant and adapted to be readily assembled at the point of installation, thereby insuring that the erection process may be rapidly carried on and that the cooling tower when finished will be of a predetermined standard design.

The present invention contemplates the use of a main frame and a plurality of side and corner units adapted to be assembled relative to the main frame in a manner to produce a cooling tower of any predetermined capacity.

The invention is illustrated in the accompanying drawings, in which:

Figure 1 is a view in side elevation showing a tower of the present construction with parts broken away to more clearly show the structural details.

Fig. 2 is a view in plan showing the completely assembled tower.

Fig. 3 is an enlarged view in section through the feed and distributing troughs as seen in the line 3—3 of Fig. 2.

Fig. 4 is a view in elevation showing one of the corner units.

Fig. 5 is a view in elevation showing one of the side units.

The present invention is particularly concerned with a cooling tower of the general type shown in my Patent No. 1,334,515, issued March 23, 1920, and entitled "Water cooling tower." In that patent, however, the cooling tower is gradually built up from slat and frame members while in the present instance the frame is originally built, thereafter the louvers are formed from corner and side louver sections built at the manufacturing plant and assembled at the erection locality.

In the drawings, 10 indicates vertical corner posts forming the vertical frame members upon which horizontal frame members 11 are supported. The corner posts and

frame members are here indicated as being formed of wood. Suitable diagonal braces 12 are used to secure the corner posts in rigid relation to each other while the horizontal frame members 11 are adapted to cross each other at the posts and to be secured thereto. Attention is directed to the fact that the horizontal members project a considerable distance from the vertical faces of the posts, thus forming out bearing supports for the louvers 13. These louvers are of composite construction and comprise side louver sections 14, and corner sections 15. Each of the sections consists of grooved end rails 16 into which the opposite ends of the louver boards 17 project. It is preferable that the louver boards shall overlap each other at their joints, thereby providing a substantially water tight wall which will prevent leakage of the water in the cooling tower and also shield the central portion of the tower from the action of wind. The louver walls extend upwardly and outwardly at angles of substantially 45° while the sections are bolted by their lower edges to the horizontal frame members 11 at points near the posts 10 and by their upper edges to the outer ends of the horizontal frame members, thus being supported in their inclined positions. In this manner the upper edges of the louver walls will conceal the lower edges of the super adjacent walls, thus forming a complete wind break while permitting free circulation of air between the various walls. In the drawings the cooling tower is formed from single sections 14 and 15, the sections 14 being secured along the sides of the tower and between the horizontal frame members while the sections 15 are secured diagonally across the corners of the tower and between the projections of the horizontal frame members crossing at the posts. If the length of section 14 is excessively great intermediate boards 18 may be used to secure the various louver boards 17 in position and prevent them from sliding or sagging.

Mounted upon the horizontal frame sections and within the area defined by these sections and the corner posts are a plurality of superimposed decks. The uppermost of these decks is a distributing deck 19 secured at the top of the frame and formed of a plurality of slats extending parallel to each other and disposed in spaced relation to each other. This construction is more completely disclosed in my patent



2

1,442,784

tioned in the foregoing specification. A plurality of frame members beneath the distributing deck are cooling decks 20. These decks are formed in a similar manner to that of the distributing deck and are arranged with their slats extending in the same general direction as the slats of the distributing deck. At intervals throughout the height of the tower redistributing decks 21 are provided. The redistributing decks are also formed in the manner previously described while their slats lie at right angles to the slats of the cooling decks. This will permit the proper overflow of the water onto the various cooling decks and will further insure that the water will be redistributed to be uniformly apportioned to the various decks, even though the tower is in operation in a high wind.

The delivery and initial distribution of the water is made from a main launder 22 which is supported above the first distributing deck 19 and is formed as shown in Fig. 3. This launder comprises a plurality of longitudinally extending boards 23 which are tongued and grooved to form a substantially water tight trough. These launder boards are held together by frame members 24. The frames are formed with a substantially accurate semi-circular seat adapted to conform to the outer curved faces of the boards and to provide a support for the boards when they are secured in position by the clamping bars 25. Final delivery of water from the main launder to the distributing deck is brought about through the lateral troughs 26. These members are preferably formed of cast metal and interlock with the frames 24 while communicating with the main launder. The troughs are secured by their outer ends to the horizontal frame members while their inner ends are detachably secured to the frames 24. This is brought about by flanges 27 extending from the sides of the troughs 26 and adapted to slide into guides 28 cast integral with the frames 24. The ends of the troughs upon which the flanges are secured are open and therefore communicate with the openings 29 through the frame members 24 and the boards of the launder. The guides 28 are diagonally disposed as well as the flanges 27 received thereby.

In assembly and operation of the present invention the specifications of the cooling tower are first determined and then the posts and horizontal frame members are cut. The various deck slats are also cut. The louvre sections 14 and 15 are cut and assembled to form the units shown in Figs. 4 and 5. The material in this condition is then shipped to the point of assembly where the corner posts are erected and the horizontal frame members secured thereto as clearly shown in Fig. 1 of the drawings.

The various deck slats are then secured in position by suitable deck clips after which the side and corner louvre sections are secured to the horizontal frame members in the diagonal positions shown in Fig. 1. The cooling tower thus constructed may then be placed in operation by delivering water to the main launder. This water may then flow out through the lateral troughs and overflow onto the slats in the distributing deck. The water may then circulate down over the various cooling and redistributing decks. It will thus be seen that by the construction here provided a cooling tower may be completely formed at the point of manufacture and its louvre units assembled after which the assembled units and the cut material may be delivered to the point of erection when the units, the frame and the various decks may be readily assembled, thus eliminating several days' time in the course of assembly and dispensing with the assistance of several days' labor.

While I have shown the preferred form of my invention as now known to me, it will be understood that various changes in the construction, combination and arrangement of parts may be made by those skilled in the art without departing from the spirit of the invention as claimed.

Having thus described my invention, what I claim and desire to secure by Letters Patent, is:

1. A water-cooling tower comprising a main frame formed by vertical posts carrying horizontally extending frame members, said frame members projecting beyond the ends of the posts, decks adapted to be supported by the portions of the frame members occurring between the posts and inclined louvers supported by the outwardly projecting ends of said frame members.

2. A composite water-cooling tower comprising a main frame conformed by vertical posts disposed in spaced relation to each other, horizontal frame members carried by the posts and forming superposed rectangular supporting frames, said frame members intersecting each other at the posts and extending there beyond, deck units adapted to be disposed upon the portions of the frame between the posts, and inclined louvre units secured to the outwardly projecting ends of the frame members.

3. In a composite water cooling tower, a main frame comprising vertical supporting posts, horizontal frame members carried thereby for the deck units supported thereby in spaced superposed relation to each other and unitary louvers adapted to be secured to said horizontal frame members.

4. In a water cooling tower, vertical supporting posts, horizontal frame members secured thereto and adapted to intersect each other at the corners of the tower, said sets of

intersecting frame members being distributed throughout the height of the tower and louvre sections diagonally disposed to the posts and secured to the horizontal frame members.

5 5. In a cooling tower corner posts, sets of horizontal frame members adapted to intersect each other at the corners of the tower and to project therefrom, said sets of frame members being arranged throughout the height of the tower and assembled louvre sections secured between the outwardly projecting frame members at the sides and corners thereof and in diagonal inclined positions.

15 6. A cooling tower comprising an upright frame structure, a plurality of superimposed cooling decks carried thereby and outwardly and upwardly flaring louvres secured around the frame in a protective position relative to said cooling decks, said louvres comprising assembled sections adapted to be secured to the frame to form a continuous louvre structure.

25 7. A cooling tower comprising vertical frame posts, horizontal frame members supported from the posts and adapted to extend beyond the sides thereof to form a rectangular frame with overhanging ends and louvre sections supported in inclined positions between the various overhanging ends of the horizontal frame members.

30 8. In a cooling tower, a louvre section comprising a pair of grooved end members and a plurality of louvre boards disposed with their ends seated within the grooves of said end members and adapted to combine to form a continuous wall structure.

40 9. In a composite cooling tower a plurality of frame sections comprising a pair of vertical posts carrying a plurality of spaced horizontal frame elements carried by said

vertical members and overhanging the sides thereof, said elements serving as supports for horizontal cooling decks and diagonal louver panels.

10. A cooling tower structure comprising a plurality of sections, each formed of vertical supporting members, horizontally extending beams in superposed relation to each other and carried by the vertical members, said beams extending beyond the outermost vertical members, horizontal cooling decks carried on the beams and between the vertical members, and inclined louver panels secured by their upper and outer ends to the projecting ends of the horizontal beams and by their lower and inner ends to the horizontal beams near the vertical members.

11. In a water cooling tower a plurality of frame sections comprising two or more posts, a plurality of horizontal frame members secured transversely of said posts and with their ends projecting from the outer faces thereof, longitudinally extending horizontal members securing the posts in vertical aligned positions, the ends of said members projecting beyond the outermost posts to which they are secured, horizontal cooling decks supported upon said members and between the posts, and diagonal panels secured by their upper and outer ends to the projecting ends of the horizontal members and secured at their lower and inner ends to the posts.

12. In a cooling tower a louver unit comprising end members, and a plurality of boards disposed between said members and adapted to combine to form a continuous wall structure.

In testimony whereof I have hereunto set my hand.

CARL F. BRAUN.

2—421

1920

CONTENTS :

1. Application O. K. papers.
2. Rejection, Jan. 15, 1921.
3. Amdt. A, Aug. 6, 1921.
4. Letter to Dftsm., Aug. 6, 1921.
5. Rejection, Sept. 19, 1921.
6. Letter to Dftsm. & Pr., Sept. 21, 1921.
7. Letter, Oct. 14, 1921.
8. Amdt. B, Dec. 27, 1921.
9. Rejection, April 4, 1922.
10. Amdt. C, July 24, 1922.
11. Letter, Oct. 18, 1922.
12. Amdt. D, Nov. 24, 1922.
13. Letter to Dftsm. & Blue Print, Nov. 24, 1922.
14. Amdt. E, Dec. 6, 1922.
15. ....
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DEFENDANT'S EXHIBIT "DD."

[Endorsed]: No. 923. U. S. Dist. Court, Nor. Dist. Calif. Deft. Exhibit "DD." Filed 11/28/23. Maling, Clerk.

No. 4221. United States Circuit Court of Appeals for the Ninth Circuit. Filed Mar. 18, 1924. F. D. Monckton, Clerk.

2—390.

DEPARTMENT OF THE INTERIOR.

UNITED STATES PATENT OFFICE.

To all persons to whom these presents shall come,  
GREETING:

~~THIS IS TO CERTIFY~~ that the annexed is a true copy from the records of this office of the File-wrapper and Contents, in the matter of the

Letters Patent of

Barton H. Coffey, Assignor to

The Mitchell-Tappen Company,

Number 1,010,020, Granted November 28, 1911.  
for

Improvement in Devices for Cooling Liquids.

IN TESTIMONY WHEREOF, I have hereunto set my hand and caused the seal of the Patent Office to be affixed, at the City of Washington, this 12th day of February, in the year of our Lord, one thousand, nine hundred and twenty-three and



of the Independence of the United States of America the one hundred and forty-seventh.

[Seal]

CARL TWINING,  
Acting Commissioner of Patents.

1911.

DIV. 32. (EX'R'S BOOK) 139—4.

NUMBER (Series of 1900),

629,214 Patent No. 1010020.

Name—Barton H. Coffey, Assor. to the Mitchell-Tappen Company, of New York, N. Y., a Corp. of N. Y.

of—Elizabeth,

County of

State of—New Jersey

Invention—Device for Cooling Liquids,

Original

Renewed

Petition May 24, 1911 , 191

Affidavit " " , 1911 , 191

Specification " " , 1911 , 191

Drawing, 2, " " , 1911 , 191

Model or Specimen , 191 , 191

First Fee Cash \$15. May 24, 1911 , 191

" " Cert. , 191 , 191

Appl. filed complete May 24, 1911 , 191

Examined—Jay F. Bancroft, Exr.

Sept. 29, 1911

Allowed—M. M. Mortimer,

For Commissioner

For Commissioner.

Notice of Allowance Oct. 7, 1911 , 191

Final Fee Cash \$10, Oct. 28, 1911 , 191

" " Cert. 191 , 191

Division of App., No. . . . . filed . . . . ., 1911.  
PARTS OF APPLICATION FILED.

Patented—November 28, 1911.

Attorney—Edward Van Winkle, #90 West St.,  
New York, N. Y.

Associate Attorney

(No. of Claims Allowed—6.)

Title as Allowed—Device for Cooling Liquids.

EDWARD VAN WINKLE,

West Street Building,

NEW YORK.

Cedar & West Streets.

Consulting Patent Engineer,

\$15. Received.

C.

May

23.

1911.

Ck.

Chief Clerk, U. S. Patent Office.

May 23, 1911.

Commissioner of Patents,

Sir:

Enclosed herewith find specification and two sheets of drawings for application for patent in alleged improvements for cooling device for liquids, Barton H. Coffey, applicant, together with check to your order for the sum of \$15.00 covering application fee. There is also enclosed a set of brown prints taken from the drawings.

Very truly yours,

EDW'D VAN WINKLE,

Registered Attorney No. 6122.

Commissioner of Patents,

Washington, D. C.

629214—1

Mail Room.

May

24,

1911.

U. S. Patent Office.

4169.

U. S. Patent Office.

May 26, 1911.

Division XXXII.

Serial No. 629,214. Paper No. 1.  
Application.

PETITION.

Filed May 24, 1911.

To THE COMMISSIONER OF PATENTS:

Your petitioner, BARTON H. COFFEY, a citizen of the United States, residing in Elizabeth, County of Union, State of New Jersey, whose Post Office address is 149 Broadway, in the Borough of Manhattan, City, County and State of New York, prays that Letters Patent of the United States may be granted to him as sole inventor for Improvements in DEVICE FOR COOLING LIQUIDS, as set forth in the annexed specifications, and he hereby appoints,

EDWARD VAN WINKLE,

West Street Building, 90 West Street, Borough of Manhattan, City, County and State of New York, (Registration Number 6 122), his attorney, with full powers of substitution and revocation, to prose-

cute this application, to make alterations and amendments therein, to receive the Patent and to transact all business in the Patent Office connected herewith.

Dated this 23d day of May, A. D. 1911.

[Seal]

BARTON H. COFFEY.

1.

629214—2





TO ALL WHOM IT MAY CONCERN:

¶ Be it known that I, BARTON H. CUFFY, residing in Elizabeth, Union County, State of New Jersey, have invented certain new and useful improvements in a DEVICE FOR COOLING LIQUIDS, of which the following is a specification.

¶ My invention relates to improvements for cooling liquids by natural aeration and evaporation, caused by separating in small drops or streams which are then <sup>brought</sup> into contact with the air; and more particularly confined to an improved construction of drip decks used for separating the liquid into drops.

¶ The foregoing and other features of my invention will now be described in connection with the accompanying sheets of drawings forming part of this specification, in which I have represented the device in its preferred form, after which I shall point out more particularly, in the claims, those features which I believe to be new and of my own invention.

¶ FIGURE 1 is a perspective view of my cooling tower. FIGURE 2 is a section of the drip bars employed by me. FIGURE 3 is a modification of the drip bars shown in FIGURE 2. FIGURE 4 is a section, A-A FIGURE 1, of the drip deck employed, showing fastening pins 10 at the end of each bar. FIGURE 5 is a section, B-B FIGURE 1, of the drip deck showing its fastenings on the ends to the general frame-work. FIGURE 6 is a plan of each deck.

¶ The frame-work of my tower consists of uprights 1 with decks 2 and collecting pan or tank 3 at the bottom. The liquid to be cooled is <sup>brought</sup> to the supply pipe 4 and distributed over the top deck in a manner familiar to cooling towers. The decks are formed of drip bars 5 which may be of any desired shape and are <sup>loosely</sup> splined together with splines 7, said splines being shorter than the length of the bar; on each







*B*  
*a*  
CLAIM 1. In a device of the class described <sup>and</sup> ~~mounted in a frame~~ a deck consisting of ~~parallel bars~~ <sup>separately framed to a member on each end</sup> the adjacent bars <sup>and</sup> ~~being~~ <sup>loosely</sup> fastened together at intervals throughout their entire length.

*172*  
*a*  
CLAIM 2. In a device of the class described a deck consisting of parallel drip bars with space in between the bars, short spines <sup>and</sup> ~~connecting~~ <sup>loose</sup> the bars at intervals.

*a*  
~~CLAIM 3.~~ CLAIM 3. In a device of the class described 10 a deck consisting of drip bars securely fastened at each end, with space in between the bars, the adjacent bars <sup>loosely</sup> ~~being~~ <sup>with</sup> spined together at intervals throughout their entire length.

CLAIM 4. A drip bar of a rectangular section 15 having a curved top, two grooves on the bottom and a groove on each of the vertical sides.

*a*  
~~CLAIM 5.~~ CLAIM 5. In a device of the class described 20 a deck consisting of drip bars individually fastened at each end, with space in between the bars, the adjacent bars <sup>loosely</sup> ~~being~~ <sup>with</sup> spined together at intervals throughout their entire length.

*dda<sup>2</sup>*  
*chilo* *a7* ✓

copy 14  
5



Sworn to and subscribed before me this 23d day  
of May, A. D. 1911.

[Seal]

JOSEPH FIELL,  
Notary Public, New York County.

5.

629214—6

Fig. 1,

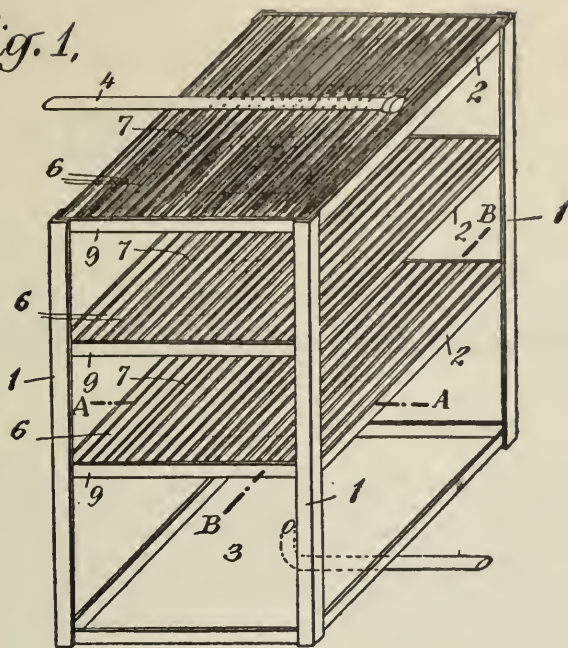
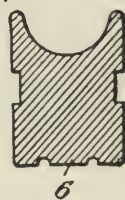


Fig. 2,



Fig. 3,



WITNESSES:

M. M. Faulstich  
 Marie C. McLean

INVENTOR

Barton H. Coffey

BY  
 Edward Paulinitske  
 HIS ATTORNEY

629214-7

Fig. 4,

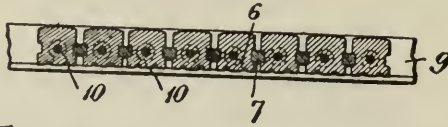


Fig. 5,

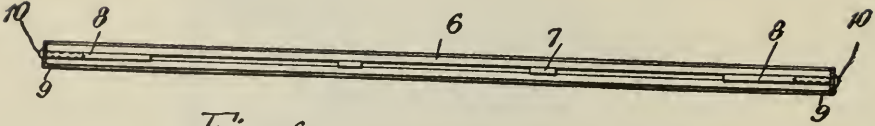
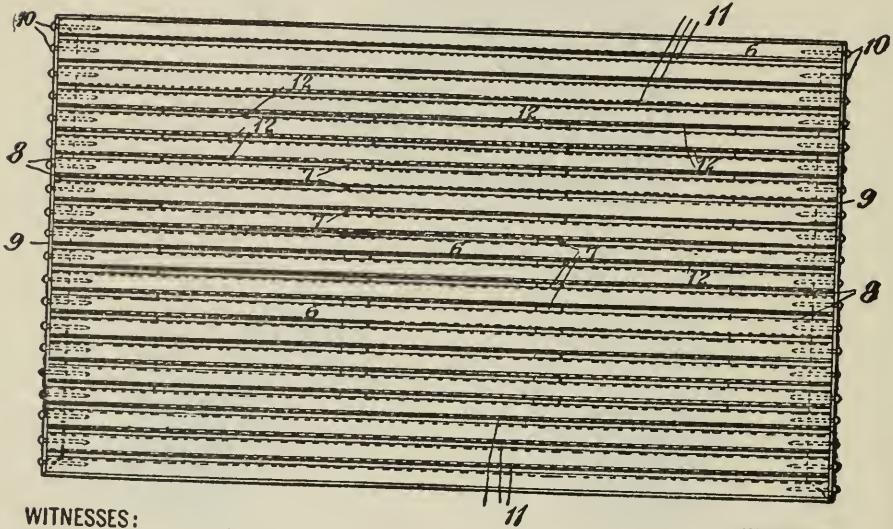


Fig. 6,



WITNESSES:

M. M. Sanchez  
 Marie C. N. S. San

INVENTOR

Barton H. Coffey

BY  
 Edward Paulerinkly  
 ATTORNEY

629214-8

U. S. Patent Office,  
June 24, 1911.  
Mailed.

2—260

EO

Div. 32

Room 278

Paper 2

Address only  
"The Commissioner of Patents,  
Washington, D. C."

All communications respecting  
this application should give  
the serial number, date of fil-  
ing, and title of invention.

---

DEPARTMENT OF THE INTERIOR.  
UNITED STATES PATENT OFFICE.  
Washington.

June 24, 1911.

Barton H. Coffey,  
c/o Edward Van Winkle,  
90 West Street, New York, N. Y.

Please find below a communication from the  
EXAMINER in charge of your application, for  
"Device for Cooling Liquids," filed May 24, 1911,  
Serial No. 629,214.

E. B. MOORE,  
Commissioner of Patents.

In line 13 of page 2, "one" should be canceled,  
and in line 14, the word "drawing" should be  
pluralized.

In the brief description of Fig. 4, cross should  
be inserted before "section"; and in the descrip-  
tion of Fig. 5, longitudinal should be inserted be-  
fore "section." In line 29, page 2, "brot" should  
be brought. In line 13 of page 3, my should be in-  
serted before "invention."

Claims 1, 2, 3 and 5 are each rejected as being without invention in view of the state of the art shown in the following patents:

Fisher et al.,	649,573,	May	15,	1900,	(62—2 ) ;
Cooper	140,680	July	8,	1873,	(20—35) ;
Southwick	303,334,	Aug.	12,	1884,	(20—78) ;
Andrews	544,204,	Aug.	6,	1895,	(20—78) ;
Mills	463,702,	Nov.	24,	1891,	(20—78).

Fischer shows decks in a water cooling tower consisting of parallel drip bars slightly spaced apart.

Southwick shows a series of bars spaced apart by blocks to allow water to drip between the bars, Andrews shows bars provided with grooves in their sides and spaced apart by splines fitting in the grooves. Cooper shows the use of splines, for holding together a series of bars, and Mills shows that it is old to provide spacing blocks at intervals throughout the length of a series of bars. In view of the various uses of splines and spacing blocks,

629214—9

#629,214—2.

as shown in the above patents, no invention would be involved in providing the bars of Fischer with grooves and splines at intervals along the length of the bars.

The description should be amended to set forth the function or advantage of the specific means for spacing the bars apart as set up in the claims.

Claim 4 appears to be allowable, as at present advised.

M. B. G.

JAY F. BANCROFT,

Examiner.

629214—10



Paper 3—2 sheets.

4174.

Serial No. 629,214, Paper No. 3.

Amendment A.

Filed July 8, 1911.

Mail Room,  
July 8, 1911.

U. S. Patent Office.

U. S. Patent Office.

Jul. 10.

Division XXXII.

AMENDMENT.

IN THE UNITED STATES PATENT OFFICE.

In the Application of BARTON HAXALL COFF-  
FEY, Elizabeth, New Jersey.

DEVICE FOR COOLING LIQUIDS.

Filed May 24, 1911.

Serial No. 629,214.

Division 32.

Room 278.

West Street Building.

90 West Street,

New York City, N. Y.

July 7, 1911.

Honorable Commissioner of Patents,  
Washington, D. C.

Sir:

We beg leave to amend the above-entitled appli-  
cation as follows:

In line 13 of page 2, "one" should be cancelled  
and in line 14, "drawing" should be pluralized.

Page 2, line 22, before "section" insert cross;

line 24, before "section" insert longitudinal; line  
29, "brot" should be brought; line 39 before  
"splined" insert loosely.

At end of sentence ending on line 3, page 3, add  
and are not secured together. Page 3, after sen-  
tence ending on line 8, insert:

A' The object of this construction is to prevent loss  
of water due to windage and to confine the water  
within the limits of the tower. It will be obvious  
that no metallic fastenings are exposed and with  
this form of construction an interlocking system  
is offered which is easily and cheaply constructed.

Line 13, insert my before "invention."

CLAIM 1, line 2, after the first "bars" insert mounted in a frame; after the last "bars" insert separately fastened to the frame at each end. Line 3, "being" should be and loosely.

CLAIM 2, line 2, after "bars" insert separately framed to a member on each end. Line 3, insert loose after "short"; "connecting" should be between.

CLAIM 3, line 4, before "splined" insert loosely.

CLAIM 5, line 4, after "being" insert loosely.

Add ~~claim~~ 6. In a device of the class described, a deck consisting of drip bars individually fastened at each end, <sup>to a frame</sup> the adjacent bars being loosely splined together at intervals throughout the length, the outer <sup>portion</sup> ~~portion~~ of the deck being splined solid. *Sigo*

REMARKS: This amendment is in response to office action of date June 24, 1911. A careful review of the references cited was made and after a personal interview with the Examiner, on July 8, 1911, the above amendment is submitted, believing that the claims, as now drawn, cannot be construed to read upon the structures shown in the various references.

In all the references the bars are fastened together by through bolts and with special constructions, which in detail are not the same in any particular with the detail of the deck employed in the cooling tower shown in this application. The applicant does not contend that he has invented the splining together of the bars, for that is old, but he does contend that his cooling tower embodies patentable features as now described and covered by the claims and he believes that the case is in condition for allowance which is earnestly solicited.

Respectfully submitted,

BATTON HIXALL COPPEY,  
by *Edw. Baughn*  
His Attorney - 17 - 1st





U. S. Patent Office,  
Aug. 3, 1911.  
Mailed.

86

Div. 32	Room 278	Paper No. 4.
Address only	All communications respecting this	
"The Commissioner of Patents, Washington, D. C."	application should give the serial number, date of filing, and title of invention.	

2—260.

B.

DEPARTMENT OF THE INTERIOR.  
UNITED STATES PATENT OFFICE.  
Washington.

Aug. 3, 1911.

Barton H. Coffey,  
c/o Edward Van Winkle,  
#90 West Street, New York, N. Y.

Please find below a communication from the EX-AMINER in charge of your application, for "De-vice for Cooling Liquids" filed May 24, 1911. Serial No. 629,214.

E. B. MOORE,  
Commissioner of Patents.

Amendment filed July 8, 1911, has been incorpo-rated.

In line 8 of page 2 "brot" should read brought, in line 14 "sheet" should be pluralized.

In line 3 of page 3, the word rigidly should be inserted before "secured," in line 8, same page, and in line 2 of claim 1, the word "grillage" should be changed to read drip to be in accord with the remainder of the description and claims.



In line 3, claim 2, and should be inserted before "short." Owing to the much amended condition of claims 1 and 2, they should be rewritten upon a separate sheet of paper.

In line 3, of claim 6, presented by the amendment, to a frame should be inserted after "end"; and in line 4, "position" should be portion.

Subject to the objections above noted claims 1, 2, 3, 5 and 6 may be allowed as at present advised.

Claim 4 stands allowed.

JAY F. BANCROFT,  
Examiner.

M. B. G.

629214—13

Mail Room.

Aug. 5, 1911.

U. S. Patent Office.

U. S. Patent Office.

Aug. 8, 1911.

Division XXXII.

4176

Paper #5, 2 sheets.

Aug. 7, 1911.

Division 6.

Serial No. 629,214, Paper No. 5.

Amendment B.

Filed Aug. 5, 1911.

AMENDMENT.

IN THE UNITED STATES PATENT OFFICE.

In the Application of BARTON HAXALL COFFEEY, Elizabeth, New Jersey.

Device for Cooling Liquids.

Filed May 24, 1911.

Serial No. 629,214.

Division 32,

Room 278.

West Street Building,  
90 West Street,  
New York City, N. Y.  
August 4, 1911.

Honorable Commissioner of Patents,  
Washington, D. C.

Sir:

We beg leave to amend the above-entitled application as follows:

In line 8 of page 3 "brot" should read brought, in line 14 "sheet" should be pluralized.

In line 3, of page 3, the word rigidly should be inserted before "secured," in line 8, same page, and in line 2 of claim 1, the word "grillage" should be changed to read drip.

In line 3, claim 2, and should be inserted before "short."

In line 3, of claim 6, presented by the amendment, to a frame should be inserted after "and"; and in line 4, "position" should be portion.

Claims 1 and 2 are rewritten below, owing to the much amended condition of the claim and to insure perfect understanding.

-1-

629214—14

4177

1. In a device of the class described a deck consisting of drip bars mounted in a frame, the adjacent bars separately fastened to the frame at each end, and loosely splined together at intervals throughout their entire length.

2. In a device of the class described a deck consisting of parallel drip bars separately framed to a member on each end with space in between the bars, and short loose splines between the bars at intervals.

REMARKS: This amendment is made in response to office action of date of August 3d, 1911. It will be noted that all of the examiner's objections have been accepted, and in view of this fact it is

respectfully requested that the case be immediately passed to issue.

Respectfully submitted,  
BARTON HAXALL COFFEY,  
By EDWD. VAN WINKLE,  
Attorney-in-fact.

-2-

629214—15

Serial No. 629,214

Address only  
The Commissioner of Patents,  
Washington, D. C.

2—181.

TBM.

DEPARTMENT OF THE INTERIOR.  
UNITED STATES PATENT OFFICE.  
Washington.

Oct. 7, 1911.

Barton H. Coffey,  
c/o Edward Van Winkle,  
New York, N. Y.

Sir: Your APPLICATION for a patent for an  
IMPROVEMENT in  
Device for Cooling Liquids,  
filed May 24, 1911, has been examined and AL-  
LOWED.

The final fee, TWENTY DOLLARS, must be paid not later than SIX MONTHS from the date of this present notice of allowance. If the final fee be not paid within that period the patent on this application will be withheld, unless renewed with an additional fee of \$15, under the provisions of Section 4897, Revised Statutes.

Uncertified Checks Will Not Be Accepted.

In Remitting the Final Fee Give the Serial Number at the Head of This Notice.

The office delivers patents upon the day of their date, and on which their term begins to run. The printing, photolithographing, and engrossing of the several patent parts, preparatory to final signing and sealing, will require about four weeks, and such work will not be undertaken until after payment of the necessary fee.

When you send the final fee you will also send, **DISTINCTLY AND PLAINLY WRITTEN**, the name of the **INVENTOR** and **TITLE OF INVENTION AS ABOVE GIVEN**, **DATE OF ALLOWANCE** (which is the date of this circular), **DATE OF FILING**, and, if assigned, the **NAMES OF THE ASSIGNEES**.

If you desire to have the patent issue to **ASSIGNEES**, an assignment containing a **REQUEST** to that effect, together with the **FEE** for recording the same, must be filed in this office on or before the date of payment of final fee.

After issue of the patent uncertified copies of the drawings and specifications may be purchased at the price of **FIVE CENTS EACH**. The money should accompany the order. Postage stamps will not be received.

Final fees will **NOT** be received from other than the applicant, his assignee or attorney, or a party in interest as shown by the records of the Patent Office.

Respectfully,

E. B. MOORE,  
Commissioner of Patents.



2—103.

\$20 received as the final fee in the application of B. H. Coffey, Serial No. 629214, for Device for cooling liquids, applied from a composite letter No. 203107 received Oct. 28, 1911, from E. Van Winkle, which is on file in the Chief Clerk's room.

B/M. R.

W. W. MORTIMER,  
Chief of Issue and Gazette Division.

J. N.

629214—17.

Patent

Nov. 28, 1911

Will Issue

Address only  
"The Commissioner of Patents,  
Washington, D. C."

2—191.

TBM Serial No. 629,214  
DEPARTMENT OF THE INTERIOR  
UNITED STATES PATENT OFFICE  
Washington.

Nov. 2, 1911.

Barton H. Coffey, Assor.,  
c/o Edward Van Winkle,  
New York, N. Y.

Sir:

You are informed that the final fee of TWENTY DOLLARS has been received in your application for Improvement in Device for Cooling Liquids.

Date of receipt Oct. 28, 1911.

Very respectfully

E. B. MOORE,  
Commissioner of Patents.

629214—18

Mail Room

Dec. 19, 1922

U. S. Patent Office

In the Southern Division of the United States District Court in and for the Northern District of California, Second Division.

Honorable Commissioner of Patents,  
Washington, D. C.

Sir:

In compliance with the Act of February 18, 1922 (41 Stat. L. —), you are advised that there was filed on the 22d day of December, 1922, in this court an action, suit, or proceeding No. 923—Eq., entitled: Name—COOLING TOWER COMPANY, Inc., a corporation, Plaintiff,

Address—City of New York, State of New York,  
*versus*

Name—C. F. BRAUN & CO., a corporation, Defendant,

Address—San Francisco, California,  
brought upon the following patents:

Patent No.	Date of Patent.	Patentee.
1. 1,010,020	November 28, 1911.	Barton H. Coffey,
2. ....	.....	assignor to Mitch-
3. ....	.....	ell-Tappen Com-
4. ....	.....	pany, and by said
5. ....	.....	assignee assigned to Cooling Tower Company, Inc.

In the above-entitled case, on the — day of —, 192—, the following patents have been included by — (insert amendment, answer, cross bill, or other pleading):

Patent No.	Date of Patent.	Patentee.
1	.....	.....
2	.....	.....
3	.....	.....
4	.....	.....
5	.....	.....

In the above-entitled case the following decision has been rendered or decree issued:

.....  
.....

IN WITNESS WHEREOF I have affixed my hand this 22d day of December, 1922, at San Francisco, California.

[Seal]

WALTER B. MALING,

Clerk of Said Court.

By J. A. Schaertzer,

Deputy Clerk.

B. H. COFFEY.  
DEVICE FOR COOLING LIQUIDS.  
APPLICATION FILED MAY 24, 1911.

1,010,020.

Patented Nov. 28, 1911.

2 SHEETS—SHEET 1.

Fig. 1.

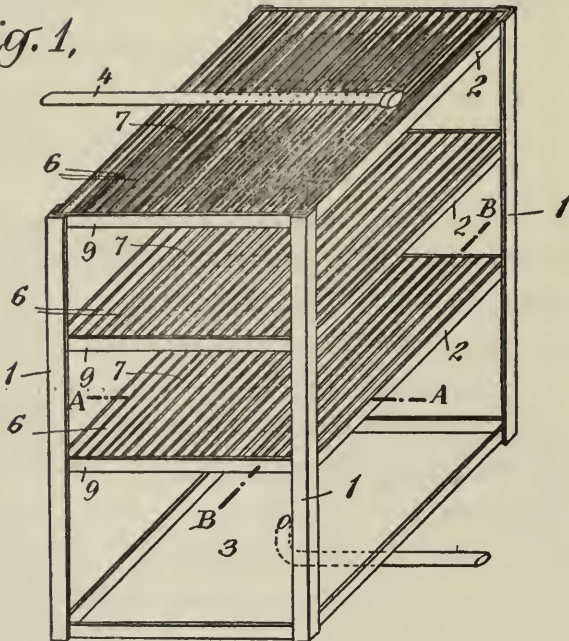


Fig. 2.



Fig. 3.



WITNESSES:

M. M. Faucher  
Marie C. ...

INVENTOR

Barton H. Coffey

BY  
Edw. Paulin

B. H. COFFEY.  
DEVICE FOR COOLING LIQUIDS.  
APPLICATION FILED MAY 24, 1911.

1,010,020.

Patented Nov. 28, 1911.

2 SHEETS-SHEET 2

Fig. 4,

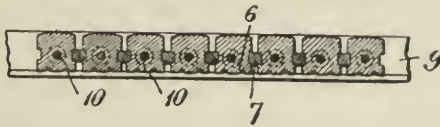


Fig. 5,

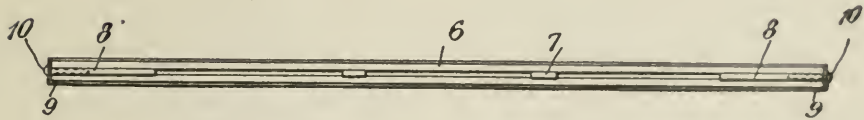
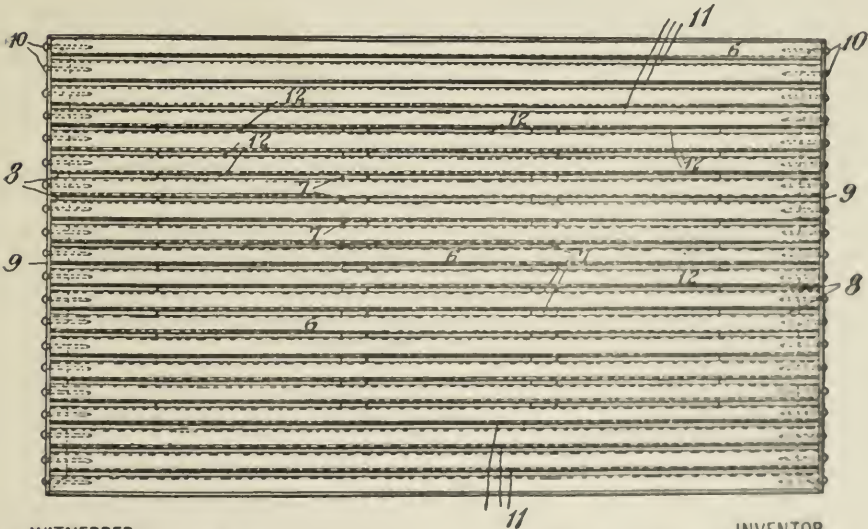


Fig. 6,



WITNESSES:

M. M. Sanchez  
Marie C. D. San

INVENTOR

Barton H. Coffey

BY  
Edw. D. Baulin  
ATTORNEY



## UNITED STATES PATENT OFFICE.

BARTON H. COFFEY, OF ELIZABETH, NEW JERSEY, ASSIGNOR TO THE  
MITCHELL-TAPPEN COMPANY, OF NEW YORK, N. Y.,  
A CORPORATION OF NEW YORK.

## DEVICE FOR COOLING LIQUIDS.

1,010,020.

Specification of Letters Patent. Patented Nov. 28, 1911.

Application filed May 24, 1911. Serial No. 629,214.

To all whom it may concern:

Be it known that I, Barton H. Coffey, residing in Elizabeth, Union County, State of New Jersey, have invented certain new and useful Improvements in Devices for Cooling Liquids, of which the following is a specification.

My invention relates to improvements for cooling liquids by natural aeration and evaporation, caused by separating in small drops or streams which are then brought into contact with the air; and more particularly confined to an improved construction of drip decks used for separating the liquid into drops.

The foregoing and other features of my invention will now be described in connection with the accompanying sheets of drawings, forming a part of this specification, in which I have represented the device in its preferred form, after which I shall point out more particularly, in the claims, those features which I believe to be new and of my own invention.

Figure 1 is a perspective view of my cooling tower. Fig. 2 is a section of the drip bars employed by me. Fig. 3 is a modification of the drip bars shown in Fig. 2. Fig. 4 is a cross section, A—A Fig. 1, of the drip deck employed, showing fastening pins at the end of each bar. Fig. 5 is a longitudinal section, B—B Fig. 1, of the drip deck showing its fastenings on the ends to the general frame-work 9. Fig. 6 is a plan of each deck.

The frame-work of my tower consists of uprights 1 with decks 2 and collecting pan or tank 3 at the bottom. The liquid to be cooled is brought to the supply pipe 4 and distributed over the top deck in any manner familiar to cooling towers. The decks are formed of drip bars 6 which may be of any desired shape and are loosely splined together with splines 7, said splines being shorter than the length of the bar; on each end of these bars splines 8, longer than splines 7, connect the bars together. The bars are each individually held to the horizontal frame-work 9 by screws or dowels 10, and are not rigidly secured together. The outer members are splined together with continuous splines 11. It will, therefore, be readily understood that each deck is built up of certain portions all around the

edge of the tower, the middle portion being open, as at 12, between the short splines 7 and the drip bars 6. The object of this construction is to prevent loss of water due to windage and to confine the water within the limits of the tower. It will be obvious that no metallic fastenings are exposed and with this form of construction an interlocking system is offered which is easily and cheaply constructed.

While I do not limit myself to the bars shown in section in Figs. 2 and 3, these bars are in the preferred forms and any deviation in shape may be made without departing from the salient features of my invention and I intend the claims to cover all such modifications as naturally fall within the lines of my invention.

The operation of my device is as follows: The liquid to be cooled is discharged and distributed over the top of the tower by means of the supply pipe 4 which will then drip through the spaces 12 on to the deck below and will in this manner pass through the successive decks of the series to the collecting pan 3.

Having thus fully described my invention, what I desire to secure by Letters Patent of the United States is:

1. In a device of the class described a deck consisting of drip bars mounted in a frame, the adjacent bars separately fastened to the frame at each end, and loosely splined together at intervals throughout their entire length.

2. In a device of the class described a deck consisting of parallel drip bars separately framed to a member on each end with space in between the bars, and short loose splines between the bars at intervals.

3. In a device of the class described a deck consisting of drip bars securely fastened at each end, with space in between the bars, the adjacent bars being loosely splined together at intervals throughout their entire length.

4. A drip bar of a rectangular section having a curved top, two grooves on the bottom and a groove on each of the vertical sides.

5. In a device of the class described a deck consisting of drip bars individually fastened at each end, with space in between the bars, the adjacent bars being loosely splined together at intervals throughout their entire length.

2

1,010,020

6. In a device of the class described, a deck consisting of drip bars individually fastened at each end to a frame, the adjacent bars being loosely splined together at intervals throughout the length, the outer portion of the deck being splined solid.

This specification signed and witnessed, at

room 1312, West Street Bldg., in the city of  
New York, this 23d day of May A. D., 1911.

BARTON H. COFFEY.

In the presence of—

EDWD. VAN WINKLE,

MARIE E. McLEAN.

---

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

---

10-28-11

Refrigeration  
Beer-Cooler

2-421.

1911.

CONTENTS:

Print May 24/11.

- 1. Application papers. O. K.
- 2. Rejection, June 24, 1911.
- 3. Amdt. A, July 8, 1911.
- 4. Letter, Aug. 3, 1911.
- 5. Amdt. B, Aug. 5, 1911.
- 6. Notice of Suit Dec. 29-22
- 7. ....
- 8. ....
- 9. ....
- 10. ....
- 11. ....
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In the Southern Division of the United States District Court Northern District of California, Second Division.

No. 923.

COOLING TOWER COMPANY, INC.,  
Plaintiff,

vs.

C. F. BRAUN & CO. (a Corporation),  
Defendant.

AFFIDAVIT OF CHAS. MOSER.

State of California,  
City of County of San Francisco,—ss.

Chas. Moser, being first duly sworn, deposes and says as follows:

(1) I live in the city of Palo Alto, county of Santa Clara, State of California. I am a civil engineer by profession and am instructor in Mechanics of Materials in the Stanford University, which position I have held for approximately fourteen years. My duties include the charge of the laboratory for the testing of materials and structures of various kinds. I also give the lectures in the course known as "Mechanics of Materials." The problems I am called upon to consider in connection with my work relate to the internal stresses, the deformations and stability of the various elements of structures subjected to loads.



(2) My technical training and experience as an engineer may be stated as follows: I am a graduate of Stanford University, graduating in 1908. I was for two years connected with the Commissioner of Engineers for the reconstruction of the Stanford University after the 1906 earthquake, and since that time I have held a position on the teaching staff of Stanford University and for six months each year I am in daily contact with structural problems. At various times I have been called in consultation on various engineering projects. With other work I designed the framing details and inspected the erection of a steel mast 626 feet in height located near Palo Alto, California, and now used by the Federal Telegraph Company.

I am a member of the American Society of Civil Engineers and the American Society for Testing Materials.

(3) My attention has been called to the illustration of cooling tower shown in the catalog of B. Franklin Hart, Jr. & Co., Defendant's Exhibit 15; also to the construction of cooling tower shown in the catalog of the Plaintiff, Cooling Tower Company, Exhibit 21, Cut No. 14, appearing on the page indicated as Sec. A—Page 1, and to Defendant's Model G and to the model Defendant's Exhibit "D," illustrating the defendant's tower construction; and I understand the construction of the said several towers illustrated in said publications and models. The construction shown in said Hart Catalog is, as far as apparent from the very meager and indistinct disclosure of said cut, substantially

identical with the construction shown in the patent to B. F. Hart, Jr., entitled *Cooling Tower*, numbered 1,228,207, May 29, 1917. In this Hart catalog appears to be shown the same double deck arrangement that appears in the Hart patent mentioned, in which double decks are indicated by the reference characters 20, more clearly shown in Fig. 2. The louvers shown in Hart are numbered 25 in the patent and the horizontal tie members which appear to extend out from the vertical columns of the Hart Catalog structure apparently correspond to the horizontal tie bars 22 of the Hart patent mentioned. There is nothing to indicate in the Hart catalog that these horizontal ties, to which I will give the reference character 22, are in any sense an extension or continuation of the horizontal joists or deck supports which carry the decks. It will therefore be assumed that the showing in the Hart cooling tower corresponds substantially to the showing in said Hart patent No. 1,228,207. Reference is hereby made as a part hereof to Model marked Moser A, which exemplifies the said Hart construction. Model marked Moser Model B exemplifies the construction illustrated in what may be termed the Plaintiff's tower, illustrated in the blue print No. 59. Moser Model A, at the same time exemplifying the Hart construction, exemplifies the same principle existent in the representation of the Plaintiff's cooling tower exhibited in Model Exhibit "G." Either model Moser A or B accurately represents the essential structural elements of

Plaintiff's towers illustrated in blue print No. 59 and Model G; the structural principles being substantially the same in each.

A third model marked Moser Model C typifies and embodies the construction shown in the Braun patent No. 1,442,784, dated January 16, 1923, and in the Braun Model tower, Defendant's Exhibit "D."

An examination of these models will disclose the fact that Models A and B represent towers of a class in which vertical and horizontal members form the main frame to which are appended accessory louver members which add no strength to the tower structure as more particularly pointed out hereinafter. On the other hand, Model C exemplifies a tower of a different class, in which the vertical and horizontal frame members and the louvers are integral elements of the structure and mutually co-operate in carrying both deck and lateral loads, and give added rigidity to the entire structure.

(4) I understand the functions of the structural members of the towers illustrated by the models in resisting loads, and the stresses that may be developed in said members due to the straining action of loads. The stresses developed in resisting external loads are illustrated in a diagram which I produce and mark Moser D. The reference characters employed in this sketch correspond to the numerals appearing respectively in the Braun patent No. 1,442,784 and the Hart patent 1,288,207. In the diagram of Moser D the effective action of the structural elements of towers of the Braun and of

the Plaintiff and Hart types are indicated; first by showing the deck load and the effect of bending stresses on the horizontal members, and secondly by showing the lateral load and the effect upon the horizontal members when the lateral load is imposed.

Just as model A and B typify interchangeably the principles and action of both Hart and Plaintiff, so does that portion of the stress diagram, Exhibit Moser "D," marked Plaintiff's and Hart type, apply equally to those constructions in contradistinction to the action that takes place in Braun. In each of these towers, Plaintiff's and Hart's, due to the lack of continuity of the horizontal deck member beyond the main vertical portion the louver is an appended structure which does not influence the stress in the main framing members of the tower, except to add load. Therefore, the particular details of the louver construction of these towers are of no consequence with respect to the stability or stress situation of the main supporting frame of the towers.

By comparing the bending stress diagram for deck loads it will be seen that the horizontal members of the Braun tower undergo less stress and strain than the horizontal members of the Hart or Plaintiff's towers. This situation is due to the fact that members 13 in Braun act as tension members to relieve and distribute the stresses in the horizontal members, while in the Hart or Plaintiff's structures members 21 and 22 are idle when the deck load



is applied and do not so relieve the stresses in the horizontal deck supporting member. This situation is more fully explained in paragraph 6.

For lateral loads imparted against the side of the Braun tower the entire beam 11 of Braun and his opposite louver braces 13 will act in resisting the load, while in the Hart-Plaintiff type of tower the structure will be unstable as far as lateral load is concerned.

From the foregoing it will be seen that by the use by Braun of horizontal deck supporting members 11 which extend beyond the posts 10 and are tied thereto by the inclined members 13, the beams will be performing useful work at all times and with less stress than in the Hart-Plaintiff type of tower.

From a structural standpoint both the Hart and the Plaintiff's towers consist of two more or less independent structures, namely the main supporting structure comprising the vertical posts which are marked 10 in the Hart patent mentioned, and the horizontal framing member marked 13, and the accessory structure composed of the inclined members or louvers marked 21, and the horizontal ties marked 22. The panel marked 25 in the Hart patent is included to hold the two bents in proper relation to each other, but forms no essential element of the structure.

In both the Hart and Plaintiff's towers the louvers and horizontal ties are designed solely as wind-brakes and constitute an added load on the main



frame without contributing in any measureable degree to its structural stability. These two portions of the tower do not co-operate in any substantial manner in carrying loads. Thus, in carrying the vertical deck load, the main horizontal framing member 13 is deprived of the assistance which the outstanding horizontal member 22 might have furnished had it been a continuation of the horizontal member 13 instead of being a separate member.

Likewise, the outstanding horizontal member or tie 22 of Hart or Plaintiff can receive no assistance from the main horizontal member 13. Consequently, the field of action of the outstanding horizontal member 22 is very limited and it can support no vertical load except the louver 21 be in place. Therefore, each of the horizontal members 13 and 22 must independently support its own loads.

With respect to a horizontal load as the force of wind which on a cooling tower 20 feet high and 50 feet long amounts to 30,000 pounds, the two portions, either individually or collectively, are without stability. This situation is due to the fact that the main horizontal framing member 13 and the outstanding horizontal member 22 supporting the louver are separate pieces whose end connections at the main vertical posts 10 are incapable of preventing rotation when an actual horizontal working load is applied to the structure against the panels 25.

(5) Referring to the models Moser A and B, I would say that I am aware of the fact that the ends

of the horizontal members 13 and 22 are attached to the main vertical post 10 by either nails, bolts, pins or light brackets and that such attachments provide a joint with some slight degree of rigidity. However, while such joints may be said to be rigid with respect to the thrust of a man's hand or the blow of a carpenter's hammer, they are incapable of resisting the rotating influence of actual working loads and are therefore to be classed as pivoted joints, and in any event the construction of the louver cannot possibly add to the rigidity of the tower as a whole.

(6) In the Braun tower the various structural features as shown in the model Moser C are so designed and arranged as to constitute an integral structure, each element of which (in addition to carrying its own locally imposed loads, as do the like members in the Hart and Plaintiff's towers), is able and does make a substantial contribution toward the stability and efficiency of the structure as a whole, a function entirely lacking in Hart or Plaintiff.

In Braun the main horizontal framing member 11 extends outwardly beyond the main vertical post 10 to form the louver support instead of being cut to a length just sufficient to spike or bolt to the vertical posts 10 and requiring an additional horizontal piece for the louver support.

The continuation of the horizontal framing member 11 without cutting in Braun beyond the post and tying it to the louver, forms a cantilever beam, making it possible for the various members of the

structure to co-operate advantageously in a manner impossible in the Hart or Plaintiff's type of tower.

As previously pointed out the louvers in the Hart and Plaintiff's towers are incapable of contributing in the slightest degree to the stability of the tower against horizontal loads because of the lack of continuity of the horizontal members. Whatever stability the Hart or Plaintiff's towers may have is independent of the louver construction. On the other hand, by combining the horizontal framing member and the horizontal louver member in one unbroken member 11 in the Braun tower a very considerable degree of rigidity is attained which makes it possible to erect a considerable portion of the frame without the addition of any other system of bracing and contributing materially to the stability of the completed tower against horizontal loads.

In the Braun tower the louver is able to make a substantial contribution to the capacity of the main horizontal member 11 in carrying the deck loads. The horizontal member 11 with its continuation beyond the point of support at the post 10 in the Braun tower constitutes what is known as a restrained beam, since the outwardly extending cantilever ends of the member 11 are anchored down by means of the louver member 13.

In the Hart and Plaintiff's towers the horizontal member 13 ends at the points of support at the posts 10, forming what is known as a simple beam.

The deck loads of these members are uniformly distributed throughout their lengths in each case. For the purpose of comparison it will be assumed that the loads are equal for the two beams.

The effect of the restraint in the case of the horizontal member 11 in the Braun tower is to reduce the bending stress in the member very materially. For equal loads the maximum bending stress in the horizontal member 11 of Braun will be one-half of the maximum bending stress in the horizontal member 13 in the Hart or Plaintiff's towers.

The cross sectional dimensions of any structural member are largely determined by the stresses in that member. Since the maximum bending stress in the horizontal member 11 in the Braun tower is one-half of the maximum bending stress in the horizontal member 13 in the Hart and Plaintiff's towers for equal loads, it follows that the horizontal member 11 in the Braun tower may be made much lighter than the horizontal member 13 in the Hart or Plaintiff's towers with equal degrees of safety so far as supporting the deck load is concerned. The relative magnitudes of the stress in the members of the two towers for equal loads are shown graphically on diagram Moser D.

(7) As previously pointed out in Section 4 the stability of towers of the Hart or Plaintiff's type against lateral loads does not involve the details of louver construction. Plaintiff's Model G embodies features which illustrate this fact. Thus, assume the main vertical posts in position and the



interior horizontal deck supports in place. In this condition the structure has no stability due to the fact that the horizontal members merely rest upon brackets attached to the main vertical posts, or are toe-nailed against the posts, affording a connection capable of carrying the vertical loads, but being unstable in the matter of rotation.

In the construction of the louver this feature of weakness is not changed in any manner. The vertical member along the outer extremities of the louvers in Model G serves as a spacing bar to preserve the alignment of the louvers. Neither this vertical member nor any of the louver members in Model G serve to repair the weakness of the main frame, due to cutting the horizontal deck supporting member at the posts. This weakness is overcome in the Braun tower by combining the horizontal deck supports and the members which ties the louver to the main vertical post into one unbroken member 11 (as in Model Moser C) which is capable of exerting its full strength in the way of bending stresses at the main vertical posts.

(8) My attention has also been called to the patent to Schmidt, No. 693,625, February 18, 1902. I have read and understand said patent.

In the said Schmidt tower the lateral bracing of the tower is accomplished solely by inclining the main supporting posts B to form triangles having the foundation of the tower as bases. The horizontal deck supporting members b' extend slightly beyond the inclined posts B to support the upright



louvers E-e, but this connection of the short extensions of the joists b' beyond the inclined posts B in no way has latteral bracing of the tower as in Braun.

The louver E-e, therefore, is not an integral feature of the Schmidt tower with respect to stability, but merely constitutes an added load on the supporting frame of the tower. Further, the horizontal deck member b' acts independently of the louver and its action in carrying deck loads as shown accurately by the stress diagram for the horizontal deck member of the Hart-Plaintiff type shown on Diagram Moser D, in which the bending stresses are two times the bending stresses in Braun.

CHAS. MOSER.

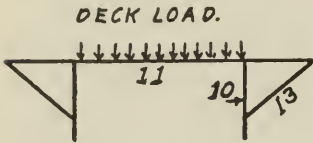
Subscribed and sworn to before me this 28th day of November, 1923.

[Seal]

W. W. HEALEY,  
Notary Public in and for the City and County of  
San Francisco, State of California.

**DIAGRAM "MOSER D"**  
 SHOWING RELATIVE STRESSES  
 IN TOWER MEMBERS.

BRAUN TYPE.



PLAINTIFF'S AND HART TYPE.



STRESS DIAGRAMS FOR DECK LOADS.

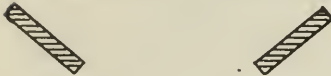
MEMBER 11. BENDING.



MEMBER 13. BENDING.

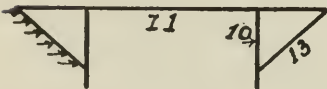


MEMBER 13. TENSION.

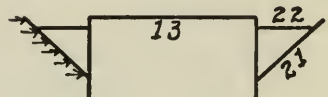


MEMBERS 21 AND 22 ARE IDLE.

LATERAL LOAD.



LATERAL LOAD.



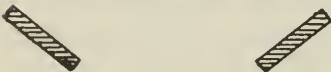
STRESS DIAGRAMS FOR LATERAL LOADS.

MEM. 11. BENDING AND TENSION OR COMPRESSION.



UNSTABLE FOR LATERAL LOAD.

MEM. 13. TENSION OR COMPRESSION.



[Endorsed]: No. 923. In the Southern Division of the United States District Court, Northern District of California, Second Division. Cooling Tower Company, Inc., Plaintiff, vs. C. F. Braun & Co. (a Corporation), Defendant. Affidavit of Chas. Moser. Filed Nov. 30, 1923. Walter B. Maling, Clerk.

No. 4221. United States Circuit Court of Appeals for the Ninth Circuit. Cooling Tower Company, Inc., a Corporation, Appellant and Cross-Appellee, vs. C. F. Braun & Company, a Corporation, Appellee and Cross-Appellant. Affidavit of Chas. Moser. Filed May 8, 1924. F. D. Monckton, Clerk.









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**United States Circuit Court of Appeals**  
FOR THE NINTH CIRCUIT.

No. 4221. 3

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COOLING TOWER COMPANY, INC., a Corporation,  
*Appellant and Cross-Appellee,*

vs.

C. F. BRAUN & COMPANY, a Corporation,  
*Appellee and Cross-Appellant.*

---

**BRIEF OF COOLING TOWER COMPANY, INC.,**  
**(Appellant and Cross-Appellee.)**

---

UPON APPEAL AND CROSS-APPEAL FROM THE SOUTHERN  
DIVISION OF THE UNITED STATES DISTRICT COURT FOR  
THE NORTHERN DISTRICT OF CALIFORNIA, SECOND  
DIVISION.

FILED  
MAY 15 1936  
F. D. MORGENTHAU  
CLERK



# United States Circuit Court of Appeals

FOR THE NINTH CIRCUIT.

No. 4221.

---

COOLING TOWER COMPANY, INC., a corporation,  
*Appellant and Cross-Appellee.*

—vs.—

C. F. BRAUN & COMPANY, a Corporation,  
*Appellee and Cross-Appellant.*

---

**BRIEF ON BEHALF OF COOLING TOWER CO.,  
INC. (*Appellant and Cross-Appellee*).**

---

## ***Statement of Facts.***

The appellant and cross-appellee, Cooling Tower Co., Inc., a corporation of the State of New York, filed its bill of complaint (p. 1) against C. F. Braun & Co. a corporation of the State of California, charging infringement of U. S. Letters Patent No. 1,010,020, issued November 28, 1911, to Mitchell-Tappen Co. as assignee of Barton H. Coffey for improvements in devices for cooling liquids.

The answer of C. F. Braun & Co. (p. 5) sets up the usual defenses and includes two cross complaints. By its cross complaint, cause one, it charges the plaintiff with improper and unlawful use of the ownership of its patents and of the fact of bringing the suit, which it

charges was with the unlawful purpose of harassing, injuring, annoying and damaging plaintiff (*sic*), its agents and customers in its and their legitimate business (p. 16). By its second cross complaint, the defendant charges the infringement by plaintiff of U. S. Letters Patent for water cooling towers, No. 1,334,515, issued March 23, 1920 and No. 1,442,784 issued January 16, 1923.

By the interlocutory decree entered December 17, 1923, from which both parties appeal, it was adjudged, and decreed that the plaintiff's patent No. 1,010,020, was not infringed and that the bill be dismissed. It was further decreed that the plaintiff was guilty of unfair competition in making improper and unlawful use of its alleged ownership of various patents on Cooling Towers, including the patent in suit, that the defendant's patent No. 1,442,784 does not involve invention and was anticipated. In view of the withdrawal by the defendant of its patent No. 1,334,515, no finding was made with reference to it. It was further decree that the plaintiff be perpetually restrained from claiming that defendant's Water Cooling Devices infringe the plaintiff's patent and from threatening any customer, representative or prospective customer of defendant with litigation, etc., and that it be referred to a Special Master to take and state the damages sustained by defendant by reason of the unlawful and unfair acts of plaintiff and the profits which have accrued to plaintiff thereby and requiring plaintiff to attend and produce before the Master, such books, papers, documents, vouchers and records, as the Master may require. Costs were awarded to the defendant. A perpetual injunction was issued under this decree (p. 390).

As both parties have appealed, the parties will be referred to as plaintiff and defendant, for clarity.



The patents in suit relate to improvements in devices for cooling water by atmospheric action. The water to be cooled is delivered at the top of an open tower having a plurality of decks, one above the other, and is distributed over the upper deck, which is formed of spaced grooved bars forming gutters, it overflows these gutters and falls between the bars to a lower open deck of similar construction and thence from deck to deck to a collecting basin at the base of the tower.

The water in its descent is thus divided into fine drops or spray, which facilitate the cooling process.

The plaintiff's patent in suit relates more particularly to the construction of the "decks."

It appears that the old deck was composed of slats nailed to a frame work at intervals and spaced apart so that the water might run down or fall between the slats.

It is highly desirable that the spacing between the slats be narrow and uniform. In the old form of nailed slats the expansion and warping of the slats caused them to buckle and to come together, which detracted from the efficiency of the tower.

The problem which Coffey solved was the even spacing of the slats or bars, securing them in such manner that expansion and warping would not destroy the uniform spacing.

As explained in his patent in suit his decks are formed of "drip bars" or slats "which may be of any desired shape" and are loosely held in position by what he calls a "spline" provided at intervals between the slats. The inventor calls attention to the fact that the bars or slats are not rigidly secured together (page 1, line 50) and that an interlocking system is offered which is easily and cheaply constructed. The inventor presents two optional forms of drip bar or slat as his preferred forms but

says that deviations in shape may be made. He describes the operation of his device as follows: The liquid to be cooled is discharged and distributed over the top of the tower by means of a supply pipe and the water then drips through spaces between the slats or bars and falls to the deck below and thus passes through the successive decks of the series to a collecting pan (Patent No. 1010020, p. 1, line 75).

Considering the disclosure of the patent, in view of the prior art, we find that the invention here involved consists in providing a drip bar deck in a cooling tower, in which the bars or slats are secured to the frame of the deck and spaced apart by spacers which permit longitudinal movement or expansion of the individual bars or slats while maintaining the spacing between adjacent bars.

This had never been done in the prior art.

Ostendorff (No. 661,192) and Burborn (No. 772,780) endeavored to overcome the warping of the slats by using metal pans which would not be affected by the water, but wooden bars appear to be more satisfactory.

The plaintiff and its predecessor, Mitchell-Tappan Co., have been engaged in the manufacture and sale of atmospheric cooling towers since 1911 and its towers have gone into extensive use throughout the United States, the Philippines, Cuba, Mexico, South America and Europe (Coffey, p. 73) and they have extensively advertised their towers by catalogue distribution and in trade papers (Phillips, p. 88).

The value of the Coffey contribution to the art has been generally acknowledged.

Carl F. Braum, the president and leading spirit of the defendant corporation, saw "the superior performance of the open atmospheric type of tower" (p. 208), and

the high merit of plaintiff's device had spread its reputation across the continent when defendant wrote to plaintiff on November 21, 1914 (Plaintiff's Exhibit 1):

"We are interested in your cooling towers and would like to receive as complete information as you care to give us. We have sold a number of Alberger towers, which we used to represent but which we no longer represent, and are, therefore, looking about for something of equal or superior merit."

The Alberger tower mentioned in this letter is of the closed type as distinguished from plaintiff's open, atmospheric type.

Plaintiff answered this first letter from defendant on November 27, 1914 (Plaintiff's Exhibit No. 4) giving the particulars of its tower and enclosing its descriptive Bulletin No. 7. It said in this letter:

"Should you take up the sale of our towers energetically we will be pleased to give you complete information as to the reasons of the fall-downs in our competitor's towers and how we have avoided them."

Mr. Braun had in contemplation a trip to New York and so advised plaintiff and it was proposed that a personal interview be arranged (Plaintiff's Exhibit No. 5).

A number of inquiries were received by plaintiff from the Pacific Coast, of which plaintiff advised defendant (Exhibit No. 7) and under date, March 29, 1915, it received an inquiry from Shell Company of California (Plaintiff's Exhibit No. 17) which it answered on April

5, 1915, giving estimate and particulars (Exhibit No. 8).

While thus corresponding with the Shell Company it received a telegram from defendant, dated April 20, 1915, asking for proposition and estimates on the cooling tower to be erected at the Shell Company plant (Exhibit 23).

The information and proposition requested was sent to defendant under date April 21, 1915, in which letter plaintiff stated:

“The wood drip bars are patented and we allow you to use them in this case only” (Plaintiff’s Exhibit No. 9).

On May 17, 1915, defendant wrote to plaintiff (Exhibit No. 18):

“We are now ready to undertake the sale of your cooling towers for this State and should this be agreeable to you, we believe that this arrangement will result to our mutual profit.

There is no one that we know of locally offering cooling towers upon which he is willing to make definite guaranties. We feel quite sure that by purchasing this special apparatus *only from you* and using California redwood in the construction of the towers we can offer properly competitive figures.

There are a great many cooling towers used in this state by Ice Companies, Refrigerating Plants, Oil Refineries, steam power plants, etc., and we have bid on much of this work with the old fashioned fan type tower but secured very little business, owing to the fact that the towers were very expensive, the power consumption of

the fan was large, and the results guaranteed were not good. The last proposition that we lost was one for the Standard Oil Co., who finally purchased spray nozzles and installed a cooling pond."

The correspondence relative to the towers at the Shell Company refinery matured into an order for two towers (Plaintiff's Exhibits Nos. 31 and 32) and, as appears by the correspondence in evidence, the plaintiff sent to defendant the plans and specifications and furnished the steel work and the defendant provided the woodwork according to the instructions received from plaintiff.

On the completion of the towers plaintiff sent to defendant its name plate with notice of its patents to be placed on the towers (Plaintiff's Exhibit 47, Braun, pp. 170, 216).

It seems clear that at this time defendant conceived the idea of using the information thus acquired and plaintiff's improvements for its own benefit independent of plaintiff, as he consulted his attorney on the subject of plaintiff's patents (p. 204).

At his interview with plaintiff's officers in New York, Mr. Braun had suggested the manufacture of plaintiff's towers by defendant on a royalty basis (Phillips, p. 102) which was not satisfactory to plaintiff.

Subsequently plaintiff was informed that defendant had enlarged one of the Shell Company towers at Martinez without plaintiff's knowledge and that it was engaged in building towers which closely approximated its own in design and appearance (p. 103).

Mr. Braun, on the stand, has admitted the difficulty of obtaining access to the cooling towers of his competitors and this difficulty confronted the plaintiff, together



with the fact that plaintiff is located on the Atlantic coast and the acts of defendant were committed across the continent, on the coast of the Pacific.

Plaintiff had hoped that a tower of the defendant's construction would be erected somewhere in the East so that it might bring suit nearer home but defendant's president has admitted on the stand that no towers have been built by defendant farther East than Texas or Oklahoma.

In 1918 there was some correspondence between counsel for the respective parties relative to the infringement by defendant, and plaintiff's counsel then requested that defendant's counsel admit what structure was being made by defendant but this information was not furnished and defendant's counsel says that he did not receive the letter (p. 259).

Plaintiff hoped that the unlawful acts of the defendant would cease and hesitated to enter into an expensive litigation at so great a distance but its hesitancy appears to have emboldened the defendant to claim the inventions of plaintiff as his own, and, as a result, plaintiff was compelled to institute this suit.

### ***The Plaintiff's Towers.***

Plaintiff's cooling towers are constructed under the three Coffey patents, viz.:

No. 1,010,020 dated November 28, 1911, for the deck construction, being the patent in suit;

No. 1,027,184, dated May 21, 1912, for the water distribution or delivery system at the top of the tower, and

No. 1,158,107, applied for June 18, 1914, and issued October 26, 1915, at about the date of the completion of the Shell Company towers and covers the bracing of the

frame by means of angular brackets or louver supports.

The first patent above mentioned (1,010,020) has been discussed above, the second patent, 1,027,184, is not material to this inquiry, the third patent, however, No. 1,158,107, covers the principle and construction for which defendant contends in its patent No. 1,442,784, dated January 16, 1923.

This construction was employed by plaintiff in the Shell Company towers.

Coffey, the inventor, says in this patent (No. 1,158,107) :

“My invention relates to improvements in the organization and combination of parts in an atmospheric cooling tower whereby important gains in structural strength are obtained without increase in weight, and other advantages.”

He calls attention to the desirability of obtaining maximum strength with minimum weight, the providing of local stiffness to resist severe wind pressure to which cooling towers are subject and says that a firm support must be given the spray louvers to resist wind stresses and ice loads.

The inventor shows two types of posts, the corner posts shown in figures 2 and 5 which are positioned at the corners, and the intermediate posts, figures 3 and 4, positioned at the sides and ends of the tower, intermediate the corner posts.

These posts are shown in greater detail in the blue print drawings of the Shell towers in evidence (Plaintiff's Exhibit No. 51).

The intermediate posts include a vertical supporting chord or post 8, which extends from the ground to the

top of the tower, to which are bolted the horizontal chords or members 3, carrying the drip decks 14 and these horizontal supports for the drip deck are extended horizontally beyond the posts 8 in an extension 5. Each of the horizontal extensions 5 of the deck members is secured at its outer end to the top margin of the louver support 6 and this louver support 6 extends downwardly and inwardly at an angle of about  $45^{\circ}$  to the point of junction or engagement of the horizontal deck support and the vertical post 8, thus forming a triangle, the vertical chord of which is the vertical side post of the tower. There is also shown a vertical chord 7 connecting the outer tips of the louvers.

It was the tower constructed in accordance with these three patents and the drawings and specifications furnished by plaintiff (Plaintiff's Exhibit 51), that the defendant erected the tower at the Shell Refinery at Martinez, California, in 1915, under plaintiff's license (p. 152).

It is submitted that defendant's structure also infringes this patent but, owing to lack of information at the time the suit was brought, infringement of this patent was not charged in the bill.

### ***The Defendant's Device.***

As has been observed, Coffey was the first to discover and devise a means of attaching the slats or drip bars of a cooling tower deck in such manner that the slats would be individually secured in spaced relation to each other, preventing the springing up of the slats and at the same time allowing individual longitudinal expansion without buckling.

Coffey solved this problem by inserting between the adjacent slats or bars a member, which he called a "spline," which would space the bars and hold them securely in position and prevent their movement or displacement in all but the longitudinal direction. It also permitted the bars to be readily laid with uniform spacing between the bars, all of which is highly desirable. Mr. Braun admitted that there is considerable expansion and that the boards have a tendency to warp (p. 180).

Defendant tried the nailing of the slats but found this unsatisfactory as was admitted on the stand by Mr. Braun (pp. 203, 213, 243). It then set about to evade the wording of the claims while retaining the substance and has offered definitions of the word "spline," used in plaintiff's patent, to this end.

The first modification or substitute for the spacing device of plaintiff's patent, which defendant used, in an effort to evade the letter but retain the substance of the invention, is that shown in his sketch, Exhibit K (pp. 236, 242). As described by Mr. Braun, this is an angle plate, the upper portion of which holds down the slats, with spacing fingers cut out and bent down between the slats or bars to space them apart. As will be observed, this substitute performs the functions of the plaintiff's device in the same way (p. 236).

The plaintiff's device is interposed in the upward path of the movement of the slat. It spaces apart the adjacent slats. It permits only the individual longitudinal movement of the slats, and permits the slats to be conveniently laid on the deck in spaced relation.

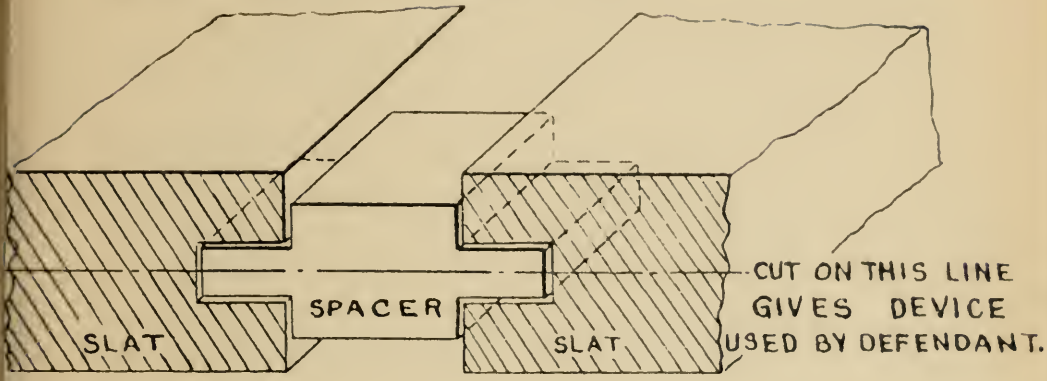
All of these functions are performed by the substitute for the plaintiff's spacing device first used by defendant in the enlargement of the Shell Company tower at Martinez (pp. 236, 246).

The substitute, later adopted by defendant and at present in use, is also the equivalent, both structurally and in function, of the device of plaintiff's patent. This last modification is described by Mr. Braun as a "spacing strap" (p. 244). It is a strip of metal having a spacing or spline section bent down between the adjacent slats or bars and having a horizontal section which prevents the slat from springing upward (see Fig. 3 of defendant's patent 1,334,515).

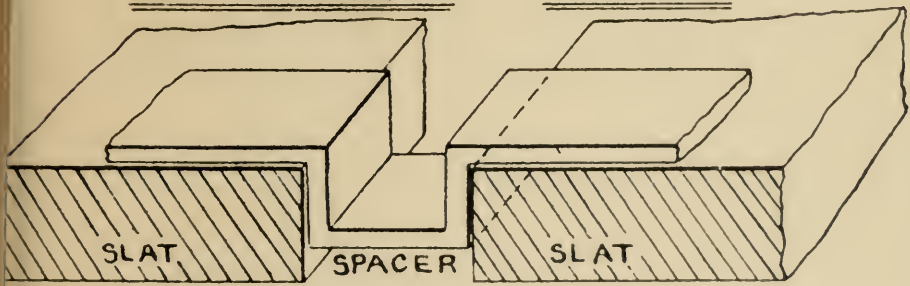
Repeating what has been said above as to the structure and function of defendant's first substitute as compared with plaintiff's device, it will be observed that this last modification also performs every function of plaintiff's device and in the same way. In fact, this last modification or substitute, used by defendant, is mechanically the spline shown in the plaintiff's patent and used in the towers at Martinez and shown in the blue prints of that tower. This blue print shows the spline as a device having two horizontal arms or extensions which prevent the vertical displacement of the adjacent slats, and a vertical section which holds the adjacent slats apart or spaces them in a horizontal plane. This is exactly what defendant has in its last substitute except that the spacer is made of metal by defendant and of wood by plaintiff. If plaintiff's spacer or spline is cut in half horizontally, it gives us defendant's device as shown on the sketch herewith.



PLAINTIFF'S SPACER



DEFENDANT'S SPACER



We find, therefore, in the device of defendant, in both its modifications, that which performs the function performed by the plaintiff's patented device in the same way and which answers every test of structural and functional exactitude with the spacer invented by Coffey.

Defendant admits this function of its device in its patent No. 1,334,515, page 1, lines 108, *et seq.*, where it is said:

"Furthermore some woods have longitudinal expansion which may be accommodated as the slats are not fixed rigidly to their support, thus preventing buckling."

### ***The Claims of Plaintiff's Patent.***

The defendant's device, in both modifications, embodies the structure of the claims of the patent in suit. Claim 5 reads:

"5. In a device of the class described a deck consisting of drip bars individually fastened at each end with space in between the bars, the adjacent bars being loosely splined together at intervals throughout their entire length."

Defendant's device is of the class described, an atmospheric cooling tower:

It has a deck; the deck consists of drip bars; the drip bars are individually fastened at each end to the frame of the tower; there is a space in between the bars; and the adjacent bars of defendant are loosely splined together throughout their entire length by the spacing straps. They are "splined" as the word is used in the patent and they are loosely splined, and this is carried from end to end throughout their entire length.

## *The "Spline."*

The function of the splines of the patent is to space the slats apart, hold them securely against vertical displacement and at the same time permit relative longitudinal movement or sliding.

Mr. Phillips, a graduate of Stevens Institute of Technology, in answer to counsel for the defendant, defined a "spline" as

"a piece of material put in between two other pieces of material to hold them the right distance apart" (Phillips, p. 115).

Mr. Coffey explained that the construction "permits the holding of the slats in spaced relation and permitting expansion without warping."

In defendant's Braun patent No. 1,334,515 the word "spline" is used to describe the slats running across the deck and sunk into the bars to dam the troughs (Patent No. 1,334,515, p. 2, l. 85). Braun called his boards "splines" (p. 178) and attempted to distinguish between his device and plaintiff's spline by the statement that his device was attached to the support (p. 238).

### *Specification of the Errors Relied Upon.*

The specification of errors filed by the appellant, the Cooling Tower Co., Inc., and upon which it relies on this appeal, are as follows:

1. That the said United States District Court for the Northern District of California, Southern Division, erred in that it erroneously decreed that:

That plaintiff's patent sued on No. 1,010,020 issued to the Mitchell-Tappan Company as as-

signee of Barton H. Coffey on the 28th day of November, 1911, even if valid, is not infringed and the Bill is dismissed.

2. That the said United States District Court for the Northern District of California, Southern Division, erred in that it erroneously decreed that:

That the plaintiff has been guilty of unfair competition against the defendant by making improper and unlawful use of its alleged ownership of various patents on Cooling Towers, including the patent aforesaid in suit, and has unlawfully and without justification threatened, both orally and in writing, defendant's customers and prospective customers with suits for infringement if they used defendant's devices and has otherwise unlawfully intimidated, harassed and annoyed defendant's said customers, and has disseminated malicious and untrue representations against defendant and its officers in an endeavor to secure the trade of the defendant and to injure the reputation, business and good-will of the defendant, and has otherwise injured and damaged defendant in its legitimate business.

3. That the said United States District Court for the Northern District of California, Southern Division, erred in that it erroneously decreed that:

That no finding is made with respect to the first Braun patent No. 1,334,515, dated March 23rd, 1920, set up in defendant's Counter-Claim, in view of the withdrawal of said patent from suit by defendant.

4. That the said United States District Court for the Northern District of California, Southern Division, erred in that it erroneously decreed that:

That a Writ of Injunction shall issue out of this court perpetually adjoining and restraining the plaintiff, its officers, directors, clerks, attorneys, servants, workmen, agents and employees, and others acting under their direction, from issuing letters or advertisements or publishing statements in any form whatsoever, either written or oral, claiming that defendant's Water Cooling Tower devices infringed said alleged Letters Patent No. 1,010,020, or any other Letters Patent of plaintiff, and from sending circulars or letters to any customer or representative or prospective customer of this defendant threatening such person or persons with litigation or prosecution, or with the costs and expenses of litigation, or otherwise publishing statements, either written or oral, intended, or by a reasonable construction likely or apt, to cause injury or damage to this defendant in the business of manufacture, use and, or sale of said Water Cooling Towers.

5. That the said United States District Court for the Northern District of California, Southern Division, erred in that it erroneously decreed that:

That the matters affecting said Counter-Claim for unfair competition be and the same is hereby referred to the Hon. HARRY M. WRIGHT, as Special Master in Chancery of this Court, to take and state the damages which defendant has sustained by reason of such unlawful and unfair acts of



plaintiff and also the profits which have accrued to plaintiff by reason of its unlawful acts as aforesaid; and the plaintiff, its directors, officers, clerks, attorneys, servants, workmen, agents and employees, and others acting under their direction, are hereby directed and commanded to attend before said Master from time to time, as required, and to produce before him such books, papers, documents, vouchers and records as the Master may require.

6. That the said United States District Court for the Northern District of California, Southern Division, erred in that it erroneously decreed that:

That the defendant do recover of the plaintiff, its costs and disbursements in this suit, in accordance with the Rules of this Court; and that the question of increase of damages and all further questions be reserved until the coming in of the Master's Report.

7. That the said Court erred in that it erroneously found and decreed that the plaintiff's patent No. 1,010,020 was not infringed by the defendant.

8. That the said Court erred in that it erroneously decreed that the bill of complaint be dismissed.

9. That the said Court erred in that it erroneously found and decreed that the plaintiff has been guilty of improper or unlawful use of its alleged ownership of various patents on Cooling Towers.

10. That the said Court erred in that it erroneously found and decreed that the plaintiff had been guilty of

improper or unlawful use of its ownership of the patent in suit.

11. That the said Court erred in that it erroneously found and decreed that the plaintiff did unlawfully or without justification threaten defendant's customers or prospective customers with suits for infringement if they used defendant's devices.

12. That the said Court erred in that it erroneously found and decreed that the plaintiff did unlawfully intimidate, harass or annoy defendant's customers.

13. That the said Court erred in that it erroneously found and decreed that plaintiff did disseminate malicious and untrue representations against defendant.

14. That the said Court erred in that it erroneously found and decreed that the plaintiff had done any unlawful or improper acts or things in an endeavor to secure the trade of the defendant or to injure the reputation, business or good will of the defendant or otherwise, or that plaintiff did in any manner injure or damage the defendant in its legitimate business or otherwise.

15. That the said Court erred in that it erroneously found and decreed that a writ of injunction should issue against the plaintiff, its officers, workmen, agents, employees or others acting under its direction.

16. That the said Court erroneously decreed that the plaintiff be enjoined or restrained from claiming that defendant's water cooling towers infringe Letters Patent No. 1,010,020.

17. That the said Court erroneously decreed that plaintiff be restrained from claiming that defendant's water cooling towers infringe any Letters Patent of plaintiff.

18. That the said Court erroneously decreed that plaintiff be restrained from sending circulars or letters to any customer or representative or prospective customer of defendant threatening such person or persons with litigation or prosecution or with costs and expenses of litigation or otherwise publishing statements intended or by reasonable construction likely or apt to cause injury or damage to defendant in the manufacture, use or sale of water cooling towers.

19. That the said Court erred in that it erroneously decreed that the defendant recover of plaintiff, the costs and disbursements of this suit.

20. That the said Court erred in that it erroneously found that the patent in suit of plaintiff has novelty only in one respect.

21. That the said Court erred in that it erroneously found that the patent or invention of plaintiff "consists of what is known as a 'spline' which is a spacing device placed between the various parts of the drip deck to keep them apart and at the same time to take up the necessary expansion or warping due to the presence of the liquid and the passage of the air over the parts."

22. That the said Court erred in that it erroneously found that the defendant in place of using the movable spline or piece of wood to separate the parts of the deck, had adopted a metal strip, consisting preferably

of brass or copper which is fastened across the drip bars or integral parts of the drip deck so that they can expand not only latitudinally but longitudinally.

23. That the said Court erred in that it erroneously found that there is doubt as to whether or not the spline of plaintiff constitutes novelty.

24. That the said Court erred in that it erroneously found and decreed that the Court having found that the device of the defendant is not an infringement of the patent of plaintiff, the injunction prayed for by the answer, restraining the plaintiff from interfering with the business of the defendant in the manner set out in the cross bill will be granted.

25. That the said Court erred in that it did not find, adjudge, and decree as requested by plaintiff, that the defendant has infringed the plaintiff's patent 1,010,020.

26. That the said Court erred in that it did not find, adjudge, and decree as requested by plaintiff, that the manufacture and sale of the device of the defendant constitutes an infringement of the plaintiff's patent 1,010,020.

27. That the said Court erred in that it did not find, adjudge and decree as requested by plaintiff, that the defendant be enjoined and restrained from infringing plaintiff's letters Patent No. 1,010,020.

28. That the said Court erred in that it did not find, adjudge and decree as requested by plaintiff, that the defendant be required to account for and pay to plaintiff the profits and the damages suffered by plaintiff thereby.

29. That the said Court erred in that it did not adjudge and decree as requested by plaintiff, that the plaintiff recover costs against the defendant.

30. That the said Court erred in that it erroneously permitted Carl F. Braun, a witness on behalf of defendant, to testify, over the objection of plaintiff, to conversations with an employee of Union Oil Co.

31. That the said Court erred in that it erroneously admitted over the objection of plaintiff incompetent and hearsay testimony of the witness Carl F. Braun on behalf of defendant as to alleged acts and conversations of one Fleming.

32. That the said Court erred in that it erroneously admitted over the objection of plaintiff incompetent and improper testimony of the witness Carl F. Braun as to alleged acts and conversations of one Fleming.

33. That the said Court erred in that it erroneously admitted over the objection of plaintiff incompetent, improper and hearsay testimony of the witness Carl F. Braun, on behalf of defendant, as to alleged acts and conversations of one Fleming.



## **BRIEF OF THE ARGUMENT.**

### **POINT I.**

**The Court erroneously found that the plaintiff's patent in suit No. 1,010,020, dated November 28, 1911, covering the deck construction, if valid, is not infringed.**

The feature disclosed in this patent and which it is claimed is infringed by the defendant is the novel deck construction, which comprises a plurality of slats or bars held in spaced relation by a spacer, which the inventor calls a "spline," which comprises a body section inserted between the slats or bars, thereby maintaining the spacing between them, and an offset section or wing on each side of the body section which engages the adjacent slats without being rigidly secured thereto, so that the slats may expand and contract longitudinally without warping or destroying the spacing.

The defendant on the trial asserted that there appears to be, in the patent drawing, a strap surrounding several drip bars, which the defendant contends would prevent the slats from freedom of longitudinal movement, and in the model which the defendant has constructed and produced, a strap is built around the model constructed of rigid metal and holds the slats against longitudinal expansion. This, however, is a creation of the defendant and it is obvious that it is not the construction invented by Coffey and that Coffey does not teach or intend to teach in his contribution to the art, that there should be fixed means to prevent the longitudinal expansion of the slats, the very thing which his invention sought to permit. A reading of the Coffey specification and drawings discloses that Coffey desired and intended to produce a deck

in which the several slats were to be permitted individual longitudinal expansion and his patent drawings show straps at the two short ends only. It is not conceivable that the inventor would show or use a surrounding band which would destroy the very object which he sought to attain.

No patent or device of the prior art had ever suggested or shown a cooling tower deck in which longitudinal expansion and contraction of the individual slats is permitted and the inventor is entitled to the fruits of his invention.

The defendant has sought to circumvent the invention by means of a device which is the equivalent in structure and function as well as mechanically of the Coffey invention. The defendant's spline or spacer is constructed of metal instead of wood as used by Coffey and has been described above. This device produces the same result attained by Coffey and in the same way. If the Coffey spacer is split horizontally on its medial line, we find the exact device of the defendant. There is a central body positioned between two adjacent slats and wings on each side of this central body, which engage the slats, permitting longitudinal movement between the individual slats but preventing their warping or displacement both laterally and vertically. No further argument would appear to be necessary to show beyond question the structural, mechanical and functional identity of the two structures.

It is submitted that Coffey made a valuable contribution to the art and that the defendant's device clearly infringes that patent.

Defendant constructed its first tower under license of plaintiff and thus admitted the validity of the patent.

The Court will look through the disguises, however ingenious, to see whether the inventive idea of the original patentee has been appropriated and whether the defendant's device contains the material features of the patent in suit and will declare infringement even when these features have been supplemented and modified to such an extent that the defendant may be entitled to a patent for the improvement.

*Crown Cork Co. v. Aluminum Stopper Co.*, 48  
C. C. A. 72.

If the infringing device performs the same functions as the patented device in substantially the same way it is immaterial that it also performs some other function.

*Comptograph v. Mechanical Accounting Co.*,  
76 C. C. A. 205.

All the elements of the patent combination are employed with substantial identity in their use, and departure appears from the *letter* of the claim only, in the arrangement of these elements, without substantial difference in the principle of operation. The policy and rules of the patent law require that the patentee be protected against such evasions of the wording of the claim, form or nonessential details when the substance of the invention is thus used and is unmistakably shown in the specifications and claims.

*Columbia Wire Co. v. Kokomo Steel Co.*, 74  
C. C. A. 310.

One may not escape infringement by adding to or subtracting from a patented device, by changing its form or by making it more or less efficient, while he retains its

principle and mode of operation and attains its result by the use of the same or equivalent means.

*Lowrie Implement Co. v. Leuhart*, 64 C. C. A. 456.

The Court below appears to have misapprehended the device of defendant. After briefly describing the spacing device of plaintiff's patent, the Court said "the defendant in place of using this movable spline or piece of wood to separate these parts of the deck, has adopted a metal strip, consisting preferably of brass or copper, which is fastened across these drip bars or integral parts of the drip deck so that they can expand not only latitudinally but longitudinally (p. 385).

It is evident that the defendant's spacing strap which is bent down between the adjacent bars is intended to and does produce and maintain lateral spacing and prevents the latitudinal displacement or expansion of the slats. It is this important latitudinal spacing function of the defendant's device which the Court appears to have overlooked and misapprehended.

The defendant in its patent No. 1,334,515, in which this spacer is shown, describes them as metal bars crimped to provide slat-embracing loops and connecting, spacing and attaching portions, as shown in Fig. 3 (Braun patent No. 1,334,515, p. 1, l. 90). Inspection of the drawing of this spacer of the defendant as shown in Figure 3, of patent 1,334,515, and the spacer itself, as shown in the model before the Court, will at once show the error into which the Court has fallen.

Mr. Hagenbuch described these spacers of the defendant as "distance pieces" (p. 146) and Braun himself admitted that the object of the defendant's "crimped ribbon," as he called it (p. 178), is to permit longitudinal

expansion of the slats to keep them evenly spaced (p. 179), and he admitted that there is considerable expansion in the slats and a tendency to warp (p. 180). He also said that their purpose is to allow a longitudinal expansion of the deck boards (p. 221).

Mr. Braun also admitted that defendant's spacers serve to hold the slats in two directions and that the slats are thereby fastened against lateral expansion and vertical expansion but not against longitudinal expansion (p. 248).

## POINT II.

### **The District Court erroneously decreed an accounting by plaintiff.**

This is a matter of such grave and serious importance to appellant, Cooling Tower Company, that it unquestionably transcends every other feature of the case.

The paragraph of the decree relative to the accounting is as follows (p. 389) :

That the matters affecting said counterclaim for unfair competition be and the same is hereby referred to the Hon. Harry M. Wright as Special Master in Chancery of this Court, to take and state the damages which defendant has sustained by reason of each unlawful and unfair act of plaintiff and also the profits which have accrued to plaintiff by reason of its unlawful acts as aforesaid; and the plaintiff, its directors, officers, clerks, attorneys, servants, workmen, agents and employees, and others acting under their direction, are hereby directed and commanded to attend



before said Master from time to time, as required and to produce before him such books, papers, documents, vouchers and records as the Master may require.

Plaintiff is a reasonably prosperous corporation of the State of New York, having its office, books and records in that state and the removal of the books and records to California would result in great loss and inconvenience, while the attendance of its officers and employees in California would entail great expense.

In the opinion filed by the Court (p. 384) no mention is made of an accounting, and there was no proof before the Court sufficient to support defendant's prayer for an accounting.

It appears that on or about July 1, 1918, a letter was written by plaintiff to the Union Oil Company of California (p. 18) and on July 11, 1918, a letter was written by plaintiff to Standard Oil Company (p. 20), both in answer to letters received from them, in which its dealings with Braun were referred to and in which it mentioned its patent rights. Plaintiff, by its answer admitted these letters and it is submitted that plaintiff was entirely within its rights in sending these replies to the inquiries made, but in any event the statute of limitations, which plaintiff pleaded by leave of the Court (pp. 325-326) is a bar to any claim which might arise therefrom.

There is no proof whatever to support the allegations of the cross complaint (pp. 15-36) to the effect that plaintiff ever made any general circulation of threats of prosecution and the like.

The testimony presented by defendant relating to any such acts is contained within pages 310 to 338 of the Transcript of Record.

Carl F. Brann, testified (p. 310) that after this correspondence of 1918 no complaint as to plaintiff's alleged wrongdoing came to the attention of the defendant until 1922. Defendant attempted to show that at that time certain reports were received from customers as to a Mr. Fleming (p. 310) but defendant acquiesced in the exclusion of this testimony and said that it would not press the matter (p. 310).

It appeared that a letter was written to this Mr. Fleming and that the "annoyances" then abated (pp. 313-314). This Fleming was not employed by nor connected with plaintiff in any way except that he solicited orders for plaintiff's cooling towers. Mr. Brann was permitted to testify over objection, that prior to the letter of plaintiff to Standard Oil Company in 1918 defendant had enjoyed a substantial business with that company but following the letter of 1918 it did not receive any substantial business from that company (pp. 316-317), but it was not shown that the Standard Oil Company purchased any cooling towers from plaintiff or from others (p. 317), and in defendant's letter (Exhibit 18, May 17, 1915) it admitted that it had lost the Standard Oil Company tower before that date.

Mr. Brann testified that in the case of the Union Oil Company, who had purchased defendant's towers, the defendant quoted them on another tower and was informed by W. R. Cowan of the Gas Division that they had purchased from plaintiff a tower upon which defendant had bid (p. 325). He also testified that "Mr. Cowan gave me specific reasons for not giving us the contract" (p. 326) \* \* \* "They pertained to the acts of Mr. N. O. Fleming, the representative of the plaintiff" (p. 326). It did not appear what these alleged acts of Mr. Fleming were and Mr. Cowan, the alleged customer, was not called. Mr. Brann admitted that he

had never seen any letter or evidentiary matter emanating from plaintiff or from Mr. Fleming bearing upon the loss of any sale (p. 329).

Mr. Braun could not definitely fix the date of his conversation with Mr. Cowan, but admitted that the letter of 1918, written by plaintiff to Union Oil Company resulted in no damage to the defendant (p. 340) and that it subsequently sold its towers to that company (p. 338).

It is submitted, therefore, that there was no proof before the Court to sustain the very drastic decree for an accounting.

Mr. Braun testified that Mr. Cowan told him that Mr. Fleming had stated that defendant was using the Cooling Tower Company's design and that the Cooling Tower Company intended to sue C. F. Braum & Co. for patent infringement and that "he could not see how the Cooling Tower Company could lose" (p. 336). There was no suggestion that it was said that any suit would be brought against Union Oil Company nor against any one other than defendant nor was there any suggestion that the purchase of the defendant's tower by Mr. Cowan would be in any manner interfered with, and it is admitted by defendant that Union Oil Company bought four cooling towers from the defendant at different times during the two years following the Cooling Tower Company's letter to Union Oil Company in 1918 (p. 338). It appears that the plaintiff has never sent out any letters charging infringement by defendant except the two letters of 1918 to Union Oil Company and Standard Oil Company which caused no injury or damage to defendant and upon which any claim is barred by the statute of limitations and that nothing has ever been done or authorized by plaintiff which might in any way or manner be deemed to be an invasion of the rights

of the defendant. The statement attributed to Mr. Fleming, who is not an employee of plaintiff, but who was soliciting orders on his own account, cannot be construed to be a wrongful invasion of the rights of the defendant for which an action would lie against plaintiff. To require plaintiff, because of this single remark of Mr. Fleming, which was never repeated, to bring its books and records from New York to San Francisco and to send its officers and employees across the Continent would be a hardship and entail a loss entirely incommensurate with any result which might possibly be attained. It would greatly injure the plaintiff without benefit to the defendant.

Defendant says that the reply of the plaintiff to its cross bill admits the acts charged. The plaintiff by its reply (p. 44) denies the allegations of the cross complaint. It specifically denies the allegations contained in the several paragraphs as will appear by the concluding clause of each paragraph of the reply and asserts that each and every statement and communication made by it was made properly and in the regular and lawful prosecution of its business. The only statements made by the plaintiff to the trade as to its patent rights were the notices of the patents carried in its catalogues and marked upon its patented devices and this is what it was required to do under the patent laws.

### POINT III.

**The District Court properly found and decreed that Defendant's Patent No. 1,442,784 does not involve novelty and appears to be anticipated.**

This patent 1442784 of January 16, 1923, shows an atmospheric cooling tower of the open type, comprising



a plurality of spaced slat decks, with inclined louvers at each deck supported by the projecting ends of the horizontal deck members. As Braun says, in his specification (p. 1, l. 65) "the horizontal members project a considerable distance from the vertical face of the posts, thus forming out bearing supports for the louvers."

This patent was applied for by Braun on April 28, 1920, and was issued after the bill was filed. The old cooling towers which defendant erected under the license of plaintiff in 1915, five years before the filing of this patent application, had these louvers supported at each deck in the position shown in the defendant's patent and in similar manner, as appears by the blue prints of the Shell construction (Plaintiff's Exhibit 51) and plaintiff's patent No. 1158107 (Exhibit No. 50).

Defendant asserts that his louver supports differ from those of the prior art in that the deck timbers are extended beyond the supporting posts of the tower, in one integral piece, while in the towers which he erected in 1915 at the Shell Co. plant, under plaintiff's license, two pieces or sections were used, one of which, being bolted to the inner side of the supporting post, formed the deck support and the other section or extension, being bolted to the outside of the posts, and extending to the top of the louver formed the louver support.

It is contended by defendant that this one piece deck timber is an improvement over the old one piece support only in that it gives added strength.

The object of Braun, the inventor, as stated in the preamble of his patent, is to provide a cooling tower "which is of simple construction and so designed as to be formed from composite units formed at the plant and adapted to be readily assembled at the point of installation, thereby insuring that the erection process may be



rapidly carried on and that the cooling tower when finished will be of predetermined standard design."

This is again repeated for greater emphasis at lines 78 to 88 on page 2 of the patent and in the proceedings before the Patent Office (Paper No. 8, Dec. 14, 1921), where applicant differentiates his device from that of Hart, 1228207, cited by the Patent Office, by saying:

"Heretofore in building cooling towers it has been common practice to cut the material at the point of erection. This has proved to be expensive, and for that reason applicant has provided a tower, sections of which are assembled in units, and which units may be readily connected to form a tower of the desired capacity."

At no place in his specification nor in his proceedings before the Patent Office did Braun ever suggest that his object or intention was to give added strength to his structure and, in fact, he negatives this idea at lines 98 to 102 of page 1 of his specification where he suggests:

"If the length of section 14 (the louver) is excessively great intermediate boards 18 may be used to secure the various louver boards 17 in position *and prevent them from sagging.*"

Braun contemplated and shows in his patent a structure in which there were no intermediate supporting posts between the corner posts and no intermediate brackets between the end brackets. His intermediate board 18, shown only in Figure 2, was not intended to be and is not shown nor described as a bracket and no vertical post to which this board 18 might be attached is shown or indicated.

Braun had no idea of attaining any strength by his device and the suggestion now advanced for the first time by Prof. Moser is an afterthought brought about by the modification of the tower shown in defendant's models and doubtless constructed under the advice of Prof. Moser. The device of defendant's patent would not stand the stress and load of wind and ice.

Plaintiff's inventor Coffey by the device disclosed in plaintiff's patent No. 1158107 was the first to construct a cooling tower with the object of using the louver supports for strengthening the tower. For some unknown reason, probably through oversight or because the strengthening function now advanced was not presented before the Patent Office, the plaintiff's patent No. 1158107 was not discovered in the Patent Office. It is submitted that the Coffey device constitutes a complete anticipation of the Braun claims.

The decks and louver supports of Coffey, while mechanically one piece as described by Braun, were actually two pieces secured at their adjacent ends to the vertical posts and Prof. Moser agrees that if these two pieces are attached rigidly they constitute together the equivalent of the Braun device (pp. 345, 346, 355). In answer to a question propounded by the Court, Prof. Moser admitted that if two screws were used in his model of the Coffey structure we would have the equivalent of Braun (p. 356). His only criticism of the old Coffey device of 1914 was that it was not as strong as that of Braun. There is, however, no known case where the Coffey device has collapsed because of lack of strength and it is sufficiently strong to bear all stresses to which it is subjected. It is submitted that the Shell tower erected at Martinez in 1915 constitutes a complete anticipation of the claims of the Braun patent.

Plaintiff is not, however, compelled to rely solely on this old structure. In the Schmidt patent No. 693625, February 10, 1902 (Defendant's Exhibit T) is shown a horizontal deck beam carried beyond the supporting posts and connected at its extreme end to a louver which it supports.

Furthermore, the tower of Hart, shown in his patent 902875 (Exhibit P), is described by Coffey as follows:

"His method of support consisting of extending the members supporting his decks beyond the side post of his tower and attaching same to an inclined member which was in turn secured at its other end to the deck below, thus forming a series of triangles whose third side consisted of this side post, to these inclined members the louvers consisting of either metal or wood were secured by appropriate fastening" (p. 96).

Coffey saw this old Hart tower first about 1910 (p. 99).

Phillips also saw the Hart tower in the summer of 1913 at the plant of Elder & Wells, 17th Street and 9th Avenue, New York; he said:

"The louvers were supported by angles carried out horizontally from the deck level, the outer ends of these angles being held up by a diagonal brace running back to the tower frame" (p. 105).

The joinder of two elements into one integral part, accomplishing the purpose of both and no more is not invention.

That which infringes if later would anticipate if earlier.

*Knapp v. Morss*, 150 U. S. 221.

It is not invention to make solid, parts previously used separable.

*Rogers on Patents*, Vol. 1, page 14.

The substitution of material is not invention. *Ibid.*

The right to improve upon prior devices by making solid in lieu of jointed work on attached parts is so universal in the arts as to have become a common one.

*Consolidated Electrical Mfg. Co. v. Holtzer*,  
67 Fed. Rep. 907.

There is no proof in the case that plaintiff erected the alleged tower at the Pasadena ice plant or elsewhere in California. Plaintiff has done no construction or erection work in this State or district (p. 274).

#### POINT IV.

**The District Court erroneously decreed that an injunction issue against the plaintiff.**

The paragraph of the decree relating to the injunction is as follows:

That a writ of injunction shall issue out of this Court perpetually enjoining and restraining the plaintiff, its officers, directors, clerks, attorneys, servants, workmen, agents and employees, and others acting under their direction from issuing letters or advertisements or publishing statements in any form whatsoever, either written or oral, claiming that defendant's Water Cooling Tower

devices infringe said alleged letters patent No. 1010020, *or any other letters patent of plaintiff*, and from sending circulars or letters to any customer or representative or prospective customer of this defendant threatening such person or persons with litigation or prosecution, or with the costs and expenses of litigation, or otherwise publishing statements, either written or oral, intended, or by a reasonable construction likely or apt to cause injury or damage to this defendant in the business of manufacture, use and/or sale of said Water Cooling Towers (p. 388).

This injunction, if literally enforced, would prevent plaintiff from recourse to the courts for any cause against a customer or prospective customer of defendant.

The plaintiff has brought this suit for infringement of Letters Patent No. 1010020, only one of its several patents, which patent the Court has not found to be infringed. It was shown on the trial that the defendant has several times modified the form and details of its construction and that at least one of the other patents of the plaintiff is probably infringed at this time by the latest modification of defendant's device. It does not appear that plaintiff has ever made or authorized any threats of suit or other interference with the business of the defendant.

It is most unjust to deprive plaintiff of the right to maintain suits in proper cases against infringers of its patent rights, and yet the decree and the injunction issued in this case enjoins the plaintiff from ever asserting in any manner that any device of the defendant constitutes an infringement of any patent which plaintiff now owns or which it may hereafter acquire.

By this decree the plaintiff is branded as an outlaw and deprived of all rights under the patent laws so far



as the defendant, its customers and prospective customers are concerned. The attorneys of plaintiff are by the terms of the decree and injunction perpetually restrained and enjoined from expressing an opinion that any past or future device of the defendant infringes any patent which the plaintiff now owns or may hereafter acquire.

A mere statement of the proposition is sufficient to show the injustice of the decree appealed from.

A patentee has a right to notify persons using his device of his claims and to call attention to the fact that by using or selling it they are making themselves liable to prosecution.

*Kelley v. Ypsilanti Dress Stay Mfg. Co.*, 14  
Fed. Rep. 19.

In the *Ypsilanti* case, the Court said:

“It would seem to be an act of providence, if not of kindness, upon the part of a patentee, to notify the public of his invention and warn persons dealing in the article of the consequences of purchasing from others.”

The owner of a patent may lawfully warn others against infringement and give notice of his intention to enforce his right if done in good faith.

*Adriance P. & C. v. National Hardware Co.*,  
58 C. C. A. 163;

*Warren Featherbone Co. v. Landauer*, 151  
Fed. Rep. 130;

*Mitchell v. International Tailoring Co.*, 169  
Fed. Rep. 115;

*Virtue v. Creamery Package Mfg. Co.*, 102  
C. C. A. 413.

## POINT V.

**The Court erroneously awarded costs to the defendant.**

The defendant in this case charged the plaintiff with infringement of Letters Patent Nos. 1,442,784 and 1,334,515.

On the trial of the suit and after plaintiff had been put to the expense of preparing its defense, the defendant withdrew the charge that plaintiff had infringed the first Braum patent No. 1,334,515 (p. 265) and the Court found that the second patent of the defendant, No. 1,442,784, does not involve novelty and is anticipated (p. 388).

Under the provisions of U. S. Rev. Stat. 973, no costs shall in such case be recovered.

It is further submitted that under all of the circumstances and facts of the case, the award of costs to the defendant was improper.

## POINT VI.

### *In Conclusion.*

It is submitted that the defendant C. F. Braun & Co. has been shown to use unlawfully, the device of plaintiff's patent and that it continued to do so at the time of the trial and that plaintiff is entitled to a decree for an injunction and accounting.

It is further submitted that the device of defendant's patent was old and well known prior to the alleged invention of Braun and antedates his alleged invention

by many years, that his device is at most the result of mechanical skill and did not involve invention and was properly decreed to be void for anticipation and want of invention and novelty.

It is further submitted that plaintiff has not been shown to have made, used or sold the combination of the patent, and that plaintiff was not shown to have been guilty of any act of unfair competition in business and that it has not done any act or thing to the injury of defendant.

The several errors relied upon are set forth at length in the assignment of errors.

The decree should be reversed in so far as it is decreed that plaintiff's patent No. 1,010,020 is not infringed, that plaintiff has not been guilty of unfair competition, that plaintiff be enjoined as therein provided, that a reference is ordered, that plaintiff account for damages and profits, and that defendant recover costs and should be affirmed as to the invalidity of defendant's patent No. 1,442,784 and it should be decreed that plaintiff's patent No. 1,010,020 has been infringed by defendant, the defendant should be enjoined and restrained from further infringement thereof and decreed to account to plaintiff for and pay the profits derived by it from its infringement of plaintiff's said patent and the damages sustained by plaintiff and the appellant Cooling Tower Co. should recover its costs.

EDWARD A. O'BRIEN,  
*Attorney for Cooling Tower Co.,*  
*Appellant and Cross-Appellee.*

ANDREW FOULDS, JR.,  
*Of Counsel.*

IN THE

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**United States Circuit Court of Appeals**

**For the Ninth Circuit**

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<p>COOLING TOWER COMPANY, INC. (a corporation), <i>Appellant and Cross-Appellee,</i></p> <p>vs.</p> <p>C. F. BRAUN &amp; COMPANY (a corporation), <i>Appellee and Cross-Appellant.</i></p>
--

**Brief on Behalf of Appellee and Cross-Appellant.**

---

CHAS. E. TOWNSEND,  
*Attorney and Solicitor for Defendant-  
Cross Appellant.*

WM. A. LOFTUS,  
*Of Counsel.*

FILED

JUN 5 - 1924

F. D. MONKTON





# INDEX.

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## A.

	<i>Pages</i>
Admissions as to prior art made by plaintiffs.....	31
Admissions against interest by plaintiff in answer.....	146 - 155
Assignment of errors.....	27 - 28

## B.

Braun invention .....	69
Braun order for Shell tower.....	21
Braun Patent No. 1,442,784 file wrapper.....	91
Burden of proof on plaintiff.....	97

## C.

Coffey Patent No. 1,010,020 in suit discussed.....	28
Coffey patent file wrapper.....	40
Coffey patent not infringed by Braun.....	44, 61 - 66
Coffey patent claims.....	49, 64
Coffey Patent No. 1,158,107 (not in suit).....	98
Counter-claim of defendant .....	67

## D.

Defendant never agent for plaintiff.....	19
Distinction between plaintiff's and defendant's towers.....	11, 30, 82

## E.

Equities in the case.....	145 - 163
Expert for Braun explains tower differences.....	121 - 125

## G.

General statement .....	1 - 3
-------------------------	-------

## H.

Hart patents discussed.....	93 - 96
-----------------------------	---------

## I.

Infringement of Braun patent by plaintiff.....	139 - 143
--	-----------

## L.

Laches of plaintiff.....	101
Letter by Fleming's attorney Lake—Oct. 23, 1922.....	8

	<i>Pages</i>
Letter to Fleming from Braun's attorney, Oct. 19, 1922 .....	5 - 7
Louver construction in Braun towers discussed.....	79 - 81, 86
Louver construction in Braun tower novel.....	76

**M.**

Malicious threats and intimidations of defendant's customers by plaintiff.....	160
---	-----

**P.**

Prior art with reference to Braun patent.....	92
Prior art with reference to Coffey patent.....	31 - 36
Problems of tower construction.....	84, 90

**R.**

Relationship of the parties.....	16
----------------------------------	----

**S.**

Shell tower .....	104 - 115
Shell tower 1916 addition.....	24, 54 - 55
Spline defined .....	38 - 39
Spline never used by defendant.....	42

**U.**

Unfair competition by plaintiff.....	155 - 160
--------------------------------------	-----------

## Table of Cases.

	<i>Pages</i>
<b>A.</b>	
<i>Adamson v. Gilliland</i> , 242 U. S. 350.....	159
<i>Adriance, Platt &amp; Co. v. National Harrow Co.</i> (C. C.) 98 Fed. 118 .....	162
<i>Adriance, Platt &amp; Co. v. National Harrow Co.</i> , 121 Fed. 827 (C. C. A. 2nd Cir.).....	162
<i>Agawam Wallen Co. v. Jordan</i> , 7 Wall. 583.....	130
<i>American Bell Telephone Co. v. People's Telephone Co.</i> , 22 Fed. 309.....	97
<i>American v. Fiber Co.</i> , 90 U. S. 566; 23 L. Ed. 31.....	49
<i>American Mills Co v. American Surety Co.</i> , 260 U. S. 360; 67 L. Ed. 306.....	9
<i>Atlas Underwear Co. v. Cooper Underwear Co.</i> , 210 Fed. 347 .....	160
<b>B.</b>	
<i>Babcock and Wilcox Co. v. North American Dredging Co.</i> , 155 Fed. 265.....	131
<i>Bailey v. Witt</i> , 261 Fed. 77.....	53
<i>Barbed Wire Patents</i> , 143 U. S. 275.....	129
<i>Bates v. Coe</i> , 98 U. S. 31, 25 L. Ed. 68.....	66
<i>Bowers v. Pacific Coast Dredging and Reclamation Co.</i> , 99 Fed. 745, 747 (C. C. A. 9th Cir.).....	48
<i>Brill v. New Jersey Street Railway Co.</i> , 124 Fed. 780.....	91
<i>Brown v. Crane Co.</i> , 133 Fed. 235 (C. C. A. 7th Cir.).....	127
<i>Boyd v Janesville Hay Tool Co.</i> , 158 U. S. 260, 261, 15 Sup. Ct. 837, 39 L. Ed. 973.....	66
<i>Buchanan v. Perkins Electric Switch Mfg. Co.</i> , 135 Fed. 94 .....	134
<b>C.</b>	
<i>Cantrell v. Wallick</i> , 117 U. S. 695.....	97
<i>Casey v. Union</i> (C. C.), 45 Fed. 135, 12 L. R. A., 193.....	161
<i>Coffin v Ogden</i> , 85 U. S., 18 Wall 120, 124 (21:821), 823 .....	97
<i>Computing Scale Co. v. National Computing Scale Co.</i> , (C. C.) 79 Fed. 962.....	161

	<i>Pages</i>
<i>Consolidated Brake Shoe Co. v. Detroit Steel &amp; S. Co.,</i> 47 Fed. 894.....	136
<i>Crane v. Price, Webster's Patent Cases, 409</i> .....	133
<i>Corbin v. Eagle, 150 U. S. 40</i> .....	41
<i>Corning v. Burden, 15 How. 252, 14 L. Ed. 683</i> .....	66
<b>D.</b>	
<i>Deering v. Winona Harvester Works, 155 U. S. 286</i> .....	96
<i>Diamond Tire Case, 220 U. S. 428</i> .....	131, 134, 138
<i>Dowagian Mfg. Co. v. Superior Drill Co.; P. P. Mast &amp;</i> <i>Co. v. Same, 115 Fed. 88, 53 C. C. A. 36 (6th Cir.)</i>	89, 138
<i>DuBois v. Kirk, 158 U. S. 58</i> .....	130
<b>E.</b>	
<i>Earle v. Sawyer, Fed. Cases No. 4247</i> .....	97
<i>Eastman v. Mayor of New York, (C. C. A.), 134 Fed.</i> <i>844</i> .....	132
<i>Electric Renovator Mfg. Co. v. Vacuum Cleaner Co., 189</i> <i>Fed. 754</i> .....	160
<i>Emack v. Kane (C. C.) 34 Fed. 46</i> .....	161
<i>Emerson Electric Manufacturing Co. v. Van Nort Bros.</i> <i>Electric Co., 116 Fed. 974</i> .....	96
<i>Expanded Metal Co. v. Bradford, 214 U. S. 366</i> .....	130
<b>F.</b>	
<i>Farquhar Co. v. National Harrow Co., 102 Fed. 714</i> .....	161
<i>Faultless Rubber Co. v. Star Rubber Co., (6 C. C. A.)</i> <i>202 Fed 927, 121 C. C. A. 285</i> .....	138
<i>Freeman Electric Co. v. Johns-Pratt Co., 204 Fed. 288</i> .....	100
<i>Freeman-Sweet Co. v. Luminous Unit Co., 253 Fed. 958</i> <i>(C. C. A. 7th)</i> .....	163
<i>Foster v. Mansfield, 146 U. S. 88, 99</i> .....	103
<i>Fuller v. Yentzger, 94 U. S. 299, 305, 44 L. Ed. 107</i> .....	66
<b>G.</b>	
<i>General Electric Co. v. Sangamo Electric Co., 174 Fed.</i> <i>346</i> .....	100
<i>General Electric Co. v. Wagner Electric Manufacturing</i> <i>Co. (C. C.) 123 Fed. 101</i> .....	10
<i>General Electric Co. v. Wagner Electric Manufacturing</i> <i>Co., 130 Fed. 772</i> .....	97

	<i>Pages</i>
<i>Gormully &amp; J. Co. v. Stanley Cycle Co.</i> (C. C.) 90 Fed. 279 .....	99
<i>Goshen Sweeper Co. v. Bissell Carpet Sweeper Co.</i> , 72 Fed. 67, 19 C. C. A. 13.....	89
<i>Gunn v. Bridgeport Brass Co.</i> (C. C.) 148 Fed. 239.....	99

## H.

<i>Ham Co. v. Dietz Co.</i> , 13 C. C. A. 690.....	97
<i>Heinz v. Cohn</i> , 207 Fed. 547.....	132
<i>Hobbs v. Beach</i> , 180 U. S. 383.....	139

## I.

<i>Irvine v. Hasselman</i> , 97 Fed. 964.....	129
---	-----

## K.

<i>Kelley v. Manufacturing Co.</i> (C. C.) 44 Fed. 23; 10 L. R. A. 686.....	161
<i>Keystone Bridge Co. v. Phoenix Iron Co.</i> , 95 U. S. 274; 24 L. Ed. 344.....	49
<i>Keystone Manufacturing Co. v. Adams</i> , 151 U. S. 139....	129
<i>Kitchen v. Levison</i> , C. C. A., 188 Fed. 658.....	128
<i>Kokomo Fence Co. v. Kitzelman</i> , 189 U. S., 47 L. Ed. 689 .....	66
<i>Krementz v. Cottle Co.</i> (Collar button case), 148 U. S. 556 .....	134
<i>Kryptok Co. v. Stead Lens Co.</i> , 207 Fed. 85, 93.....	99
<i>Krupp v. Midvale</i> , 191 Fed. 588, 591.....	47

## L.

<i>Lamson Consolidated Stove Service Co. v. Hillman</i> , 123 Fed. 416 .....	129
<i>Leeds and Catlin Co. v. Victor Talking Co.</i> , 213 U. S. at 138 .....	131
<i>Lehnbeuter v. Holtaus</i> , 105 U. S. 94.....	97
<i>Lewin v. Light Co.</i> (C. C.) 81 Fed. 904.....	161
<i>Loom Co. v. Higgins</i> , 105 U. S. 591.....	133
<i>Los Alamitos Sugar Co. v. Cauvel</i> , 173 Fed. 280, 97 C. C. A. 446.....	99



## M.

<i>Mahoney v. Malcolm</i> (Eye shade case), 143 Fed. 124.....	131
<i>Manufacturing Co. v. Greenleaf</i> , 117 U. S. 554, 6 Sup. Ct. 846, 29 L. Ed. 952.....	49
<i>Marconi v. National</i> , 206 Fed. 295, 300.....	9
<i>Maunula v. Sunell</i> , 155 Fed. 538.....	131
<i>Mead-Morrison Manufacturing Co. v. Exeter Machines Works</i> , 225 Fed. 489, 496, 497 (C. C. A. 3rd).....	88
<i>Merrow v. Shoemaker</i> , (C. C.) 59 Fed. 120.....	99
<i>Miller v. Eagle Manufacturing Co.</i> , 151 U. S. 186, 208, 14 Sup. Ct. 310, 38 L. Ed. 121.....	66
<i>Milner Seating Co. v. Yesbera</i> , 133 Fed. 916 (C. C. A. 6th) .....	134, 138
<i>Mitchell v. Lilghman</i> , 86 U. S. 287, 22 L. Ed. 125.....	44
<i>Morgan Engineering Co. v. Alliance Machine Co.</i> , 176 Fed. 100 (C. C. A. 6th).....	89
<i>Morton v. Llewellyn</i> , 164 Fed. 693 (C. C. A. 9th).....	100, 129

## N.

<i>National Hollow B. B. Co. v. Interchangeable B. B. Co.</i> , 106 Fed. 693.....	130
<i>Norton v. Jensen</i> , 90 Fed. 315, 33 C. C. A. 141.....	49

## P.

<i>Pelton Water Wheel Co. v. Doble</i> , 186 Fed. 526.....	130
<i>Pelton Water Wheel Co. v. Doble</i> (Affirmed by C. C. A. 9th Cir.), 190 Fed. 761.....	130
<i>Price v. Kelly</i> , 154 U. S. 669; 26 L. Ed. 634.....	44
<i>Prince's Metallic Paint Co. v. Prince Manufacturing Co.</i> , 57 Fed. 938, 944, 6 C. C. A. 647.....	103

## R.

<i>Railroad Co. v. Mellon</i> , 104 U. S. 112, 118, 26 L. Ed. 639 .....	49
<i>Railway Co. v. McConnell</i> (C. C.) 82 Fed. 65.....	161
<i>Ransome v. Hyatt</i> , 69 Fed. 148, 16 C. C. A. 185.....	65
<i>Ross v. Montana Union Ry. Co.</i> , 45 Fed. 424.....	97
<i>Royer v. Coupe</i> , 146 U. S. 532.....	41
<i>Ryan v. Newark Co.</i> (C. C.) 96 Fed. 100.....	99
<i>Regent Mfg. Co. v. Penn. Electrical Co.</i> , 121 Fed. 80.....	132

## S.

<i>San Francisco Cornice Co. v. Beyerle</i> , 181 Fed. 692.....	130
<i>San Francisco Cornice Co. v. Beyerle</i> (Affirmed by C. C. A., 9th Cir.), 195 Fed. 516.....	130
<i>Scale Co. v. Automatic</i> , 204 U. S. 619.....	41
<i>Schultheiss Co. v. Phillips</i> , 264 Fed. 971.....	50
<i>Selectasine Co. v. Prestograph</i> , 282 Fed. 223.....	50
<i>Seymour v. Osborne</i> , 78 U. S. 516; 26 L. Ed. 33.....	44
<i>Simonds R. M. Co. v. Hathorn Mfg. Co.</i> (C. C.) 90 Fed. 201 .....	99
<i>Standard Water Systems Co. v. Griscom-Russell Co.</i> , 278 Fed. 704 .....	107
<i>Stebler v. Riverside Heights Orange Grower's Assn.</i> , 205 Fed. 735, 738.....	99
<i>Stilwell-Bierce &amp; Smith-Vaile Co., v. Eufaula Cotton Oil Co.</i> , 117 Fed. 410, 54 C. C. A. 584.....	89

## T.

<i>Taber v. Marceau</i> , 87 Fed. 871.....	66
<i>Thomsen-Houston Electric Co. v. Electrose Manufacturing Co.</i> (C. C.) 155 Fed. 543.....	10
<i>Toledo, A. A. and N. M. Ry. Co. v. Pennsylvania Co.</i> (C. C.) 54 Fed. 730, 19 L. R. A. 387.....	161
<i>Topliff v Topliff</i> , 145 U. S. 156, 12 Sup. Ct. 825, 36 L. Ed. 658.....	99

## U.

<i>Union Match Co. v. Diamond Match Co.</i> , 162 Fed. 148, 155 (C. C. A.).....	66
<i>United Shirt and Collar Co. v. Beattie</i> , 138 Fed. 136.....	91
<i>United States Consolidated Seeded Raisin Co. v. Phoenix Raisin Seeding and Packing Co.</i> (C. C.) 124 Fed. 234 .....	10
<i>United States Expansion Bolt Co. v. H. G. Kroncke Hardware Co.</i> , 216 Fed. 186, 189.....	10
<i>United States Expansion Bolt Co. v. H. G. Kroncke Hardware Co.</i> , 234 Fed. 868, 148 C. C. A. 466.....	10
<i>U. S. Mitis Co. v. Midvale Steel Co.</i> , 135 Fed. 103.....	131

## V.

<i>Vaco Grip Co. v. Sandy MacGregor Co.</i> , 292 Fed. 249.....	139
---	-----

## W.

<i>Washburn &amp; Moen Mfg. Co. v. Beat Em All Barbed Wire Co.</i> , 143 U. S. 275.....	130
<i>Webster Loom Co. v. Higgins</i> , 105 U. S. 580.....	136
<i>Western Electric Co. v. LaRue</i> , 139 U. S. 601.....	133
<i>Western Electric Co. v. Home Tel. Co.</i> (C. C.) 85 Fed. 649 .....	99
<i>Western Well Works v. Layne &amp; Bowler Corp.</i> , 276 Fed. 465, 472 .....	65
<i>Westmoreland Specialty Co. v. Hogan</i> , 167 Fed. 327 (C. C. A. 3rd) .....	89
<i>Westinghouse v. Brake Co.</i> , 170 U. S. 537; 18 Sup. Ct. 707; 42 L. Ed. 1136.....	51
<i>Wheaton v. Norton</i> , 70 Fed. 835.....	50
<i>Whiteley v. Swayne</i> , 7 Wall. 685.....	130
<i>Wilkins Shoe Button Co. v. Webb</i> , 89 Fed. 982.....	129
<i>Williams v. American String-wrapper Co.</i> , 86 Fed. 641.....	132
<i>Window Glass Machine Co. v. Pittsburgh Plate Glass Co.</i> , 284 Fed. 645, 649.....	103

No. 4221

IN THE

**United States Circuit Court of Appeals**

**For the Ninth Circuit**

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<p>COOLING TOWER COMPANY, INC. (a corporation), <i>Appellant and Cross-Appellee,</i> vs. C. F. BRAUN &amp; COMPANY (a corporation), <i>Appellee and Cross-Appellant.</i></p>
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**Brief on Behalf of Appellee and Cross-Appellant.**

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**STATEMENT.**

This case comes before your Honors on cross-appeals from a decree entered in the lower court by Hon. Judge Partridge.

These appeals concern or involve three inter-related subject-matters:

(1) Appeal of the plaintiff from that portion of the decree dismissing the bill for non-infringement of plaintiff's patent in suit No. 1,010,020, dated November 28th, 1911, issued to Barton H. Coffey, assignor of plaintiff.

(2) Appeal of the plaintiff from that portion of the decree sustaining defendant's counter-claim based on the unfair practices of the plaintiff and granting an injunction and accounting in favor of defendant and against plaintiff.

(3) Cross-appeal by defendant from that portion of the decree dismissing defendant's second cause of action for infringement of Braun patent No. 1,442,784, dated January 16th, 1923, for water cooling tower, on the ground of anticipation and lack of invention.

Except for two depositions taken on behalf of plaintiff in New York, the case was tried in open court.

If this brief is of more than ordinary length, our excuse is that the issues are of more than ordinary interest and importance to the defendant cross-appellant and the fact that there are really three appeals which have required more or less individual and separate treatment.

Both concerns, plaintiff and defendant, are manufacturers of cooling towers, although this is not the sole business of the defendant, as defendant manufactures a considerable variety of other engineering apparatus and carries on a general engineering business with its factory at Alhambra, County of Los Angeles, State of California.

The plaintiff was incorporated in 1915 (R. 87) as the successor of the Mitchell-Tappen Company,



which appears to have begun business in the manufacture and sale of Atmospheric Cooling Apparatus in the year 1911 (R. 71).

Defendant C. F. Braun & Company was organized somewhat earlier than the Mitchell-Tappen Company. Mr. Braun tells us (R. 207-209):

“I graduated in 1907 from the Department of Mechanical Engineering at Stanford University, and immediately became engaged in my profession with a concern which I believe was called the Standard Engineering Construction Company; shortly after that they formed a separate company to handle particular mechanical lines and mechanical business, carrying on construction of power plants, and pumping plants, and the like, and I think in the latter part of 1908 my associates and I bought the company, and I became president of it; we engaged, as constructing mechanical engineers, in designing power plants, pumping plants, we built a number of municipal water works, we installed large condensing equipment, a number of large tanks, built, I think, two complete municipal water works, designed some boiler plants, electric generating stations and similar work. We purchased a large part of the machinery from Eastern connections and sold it either unerected or erected, or incorporated in these plants.”

Braun states (R. 224) that the cooling tower business of defendant for the year 1922 was in excess of five hundred thousand dollars (\$500,000.00).

The plaintiff took depositions under the Equity Rules of two of its officers in New York, ostensibly to show the history of plaintiff's cooling tower busi-

ness; its relations during 1914-1915 with the defendant with respect to the erection of two towers for the Shell Oil Company at Martinez; and the alleged infringement of the plaintiff's patent in suit. These depositions are of the patentee Coffey, chief engineer of the plaintiff, and Mr. Phillips, treasurer of the company.

This testimony will be found on examination to be quite unsatisfactory as proofs of any of the material issues of the case except:

(1) to accentuate the limited character of plaintiff's patent by emphasizing the patented feature of the so-called "spline" and *underneath groove* of the deck-slats of plaintiff's steel towers which splines and grooves admittedly have never been used by the defendant in its towers; and

(2) as showing the utter lack of any proper or reasonable foundation for plaintiff starting the suit in the first place.

As a matter of fact and as appears from the record as a whole, plaintiff instituted this action against defendant merely in an effort to cover its own tracks and to save its face, and after defendant had given notice, both to the plaintiff and its Los Angeles agent, that if plaintiff did not cease its unfair practices against defendant the latter would be forced to initiate action to abate further interference with its lawful business.

The immediate cause of this present litigation is

found in the following letter from counsel for defendant to Mr. N. O. Fleming, Los Angeles agent of plaintiff, dated October 19, 1922, and reading:

"October 19, 1922.  
File No. 1200

Mr. N. O. Fleming,  
261 S. Middleton St.,  
Huntington Park, California.

Dear Sir:

### Re-Cooling Towers.

On behalf of C. F. Braun & Co., of this city and of Los Angeles, this letter is addressed to you concerning certain statements purported to have been made by you to customers and prospective customers of my client.

These statements which you are reputed to have made in certain definite and specific instances known to us include, in brief:

[1] That your principal, Cooling Tower Company, was investigating the activities of C. F. Braun & Co. in the Cooling Tower Company's business and expected to sue C. F. Braun & Co. shortly for infringement of the Cooling Tower Company's patents.

[2] That C. F. Braun & Co. were at one time agents of the Cooling Tower Company.

[3] That C. F. Braun & Co. stole the Cooling Tower Company's design.

[4] That C. F. Braun & Co.'s Towers were copies of said designs.

[5] That you could not see how the Cooling Tower Company could possibly lose such a suit.

The foregoing information in our hands comes from sources believed to be entirely reliable.

For your information and guidance I beg to say, on behalf of C. F. Braun & Co.:

[1] Concerning item 1, if you are speaking on behalf of the Cooling Tower Company it would seem obvious that the Cooling Tower Company has not taken occasion to enlighten you as to certain correspondence passing some four years ago between the Cooling Tower Company and myself and the Cooling Tower Company's attorneys in New York and myself on the subject: and for your information I am enclosing herewith copies of such correspondence, to-wit:

[1] Copy of my letter to the Cooling Tower Company, dated July 18th, 1918;

[2] Copy of letter from Ashley, Foulds & Galland, attorneys for the Cooling Tower Company, dated July 30th, 1918; and

[3] Copy of my reply to them dated August 28th, 1918.

The correspondence ended with the latter letter and as far as I know the misrepresentations of the Cooling Tower Company practically ceased at the same time until recently renewed by your pernicious activities, as above pointed out.

[2] Your charge embraced in item 2 above that C. F. Braun & Co. were at any time agents of the Cooling Tower Company, you may see for yourself is utterly false and unfounded. Furthermore, neither Mr. Braun nor C. F. Braun & Co. were at any time agents for either the Cooling Tower Company or any predecessors or subsidiaries.

Likewise, false are the more scandalous statements that C. F. Braun & Co. had ever 'stolen' or 'copied' any designs of the Cooling Tower Company.



Under the circumstances your statements, whether made in good faith or not, constitute a gross slander on the legitimate business of C. F. Braun & Co. They have resulted, as you know, of the alienation of some of C. F. Braun & Co.'s old customers and in several lost sales of late.

Mr. Braun has borne these misstatements of yours patiently for some time, feeling that in the end they would react more upon you and your Company than they would on his Company, but in view of their persistent repetition, and made with such total [dis]regard for truth and fair dealing, Mr. Braun has authorized me, in the absence of an immediate and complete retraction in writing, to institute suit forthwith against you personally and against the Cooling Tower Company for defamation of character, slander of business and unfair competition.

A satisfactory reply is, therefore, awaited from you within five days from the date of the receipt of this letter; in the absence of which it will be assumed that your statements attributed to you have been made recklessly, maliciously and in bad faith and suit will be instituted, coupled with a motion for a preliminary injunction and damages.

Yours very truly,  
 (Signed) Chas. E. Townsend,  
 Attorney for C. F. Braun & Co.

CET:C  
 Encls."

[The inclosures referred to appear in the defendant's answer and counterclaim, R. 18 to 30 inc. and as exhibits in this case. The plaintiff's Reply to the Counterclaim is unique in admitting the facts on which the charges of unfair dealing, laches



and estoppel have been based, but deny their legal effect.]

The above letter of October 19th, 1922, was acknowledged by Frederick W. Lake, as attorney for Fleming, under date of October 23rd, 1922, as follows:

“ ‘Mr. N. O. Fleming has consulted me with reference to the matter set forth in your communication of October 19, 1922, relative to the controversy that has arisen in connection with the construction of certain cooling towers. Inasmuch as the Cooling Tower Company, of New York City, would be the principal defendant in interest in any litigation instituted on behalf of your client, and inasmuch as all patents, files and other data are in the immediate possession of that corporation, I have advised Mr. Fleming to forward your communication, with the correspondence enclosed therein, to the Cooling Tower Company, at New York, for attention and reply.

“ ‘I believe I can assure you that the matter will be given immediate attention, and that you will hear from the corporation in due course. Inasmuch as the corporation will be unable to receive and reply to your communication within the five-day period required by you, however, I request that any litigation at the instance of your client be delayed until the corporation has had a reasonable opportunity to take the matter up with you.’ ”

Within a month the bill was filed. Defendant thereupon answered, and also counter-claimed on two causes of action:

- (1) For unfair trade;

(2) For infringement of two patents issued to the defendant Braun as follows:

1,334,515—March 23, 1920, and

1,442,784—January 16, 1923, both for cooling towers.

Later the first Braun patent was withdrawn without prejudice as there was no reliable evidence of any infringement (R. 264-265).

Authority for defendant's counterclaims is found in:

*Equity Rule 30;*

*American Mills Co. v. Amer. Surety Co.*, 260

U. S. 360; 67 L. Ed. 306;

*Marconi v. National*, 206 Fed. 295, 300.

In the *American Mills Co.* case, Chief Justice Taft said:

“The counterclaim and the set-off and counterclaim in the two clauses are in *pari materia* except that the first grows out of the subject-matter of the bill and the other does not. That which grows out of the subject-matter of the bill must be set up in the interest of an end of litigation. That which does not may be set up, if the defendant wishes, in one proceeding in equity quickly to settle all equitable issues capable of trial between them in issues capable of trial between them in such a proceeding, even though they are not related.”

“Plaintiff having brought a suit in this district thereby subjected itself to any counterclaim or set-off which is fairly within the

Equity Rule above quoted.” (*United States Expansion Bolt Co. v. H. G. Kroncke H. Co.*, 216 Fed. 186, 189)

“It seems to be well settled that, as stated by the court in *General Electric Co. v. Wagner Electric Manufacturing Co.* (C. C.), 123 Fed. 101:

“‘The limitation as to the district of residence of defendant, or of place of business and acts of infringement, relates merely to the place of suit, and may be waived.’ *General Electric Co. v. Wagner Electric Manufacturing Co.*, supra; *United States Consolidated Seeded Raisin Co. v. Phoenix Raisin Seeding & Packing Co.* (C. C.), 124 Fed. 234; *Thomsen-Houston Electric Co. v. Electrose Manufacturing Co.* (C. C.), 155 Fed. 543; *United States Expansion Bolt Co. v. H. G. Kroncke Hardware Co.*, 234 Fed. 868, 148 C. C. A. 466.”

The *Marconi* case is authority for the charge of infringement based on the 2nd Braun patent; the Court there having said:

“\* \* \* the rule would seem to require and direct the union of various litigations existing in equity up to the time of pleading, or, by amendment, *up to the time of trial*, between the parties to the litigation.” (Italics ours.)

Before specifying defendant’s assignment of errors it is appropriate, briefly, to outline some aspects of the cooling tower problems particularly as presented to the defendant’s engineers, as well as refer to the previous relationship of the parties.

**SUBJECT MATTER: COOLING TOWERS.**

The controversy relates to what is known in the trade as "Cooling Towers".

A cooling tower is a comparatively high, open work structure with means for conveying water to be cooled to the top of the structure and then distributing it at the top and allowing it to fall through a considerable space, with various interruptions to break the water into a spray; being cooled by giving up its heat as it falls.

To prevent the spray blowing away or drifting too much to one side or one end of the tower, and still allow for circulation of air, means are provided completely surrounding the tower in the form of so-called "louvers" or spaced inclined windshields or ventilators. After cooling it may be re-used.

Of course, neither plaintiff nor defendant was the originator of cooling towers, as will be seen by even a casual reference to the prior art, and as will be more particularly pointed out later.

---

**RADICAL DISTINCTION BETWEEN PLAINTIFF'S AND  
DEFENDANT'S TOWERS.**

There is this to be said at this point as to the radical distinctions between the cooling towers of the plaintiff and those of defendant:

The plaintiff's cooling tower is of *steel frame* construction with *interior criss-cross bracing*; the

latter interfering more or less with the proper down-flow and distribution in breaking up the water streams.

On the other hand, the defendant's patented cooling tower is of all-wood construction; the Braun type of tower being the first tower of any type wherein the *bracing is effected through the externally disposed louvers* or windshields, which latter heretofore, as in plaintiff's steel construction, had been hung as so much *dead-weight* (approximately 38% of the material in the tower being in the louvers, R. 372) on the outside of the tower proper.

This 38% of material entering into a tower had never been used before the Braun invention for *structural strength*, although one of the big factors in cooler designs is structural strength.

---

#### THE THEORY AND PURPOSE OF A COOLING TOWER.

Cooling water by exposing it to air after it has been heated and continually re-using it, is practiced on an increasingly large scale by all industries requiring a supply of cold water for cooling purposes.\*

These industries include refrigerating plants of all character; steam power plants operating with condensers; oil refineries condensing oil vapors;

---

\*Taken from Defendant's Bulletin No. 101, "Exhibit C", pages 7 to 18, inclusive.



plants containing large electrical transformers, internal combustion engines, or other mechanical equipment requiring jacket water for cooling; and many manufactories whose processes require the removal of heat.

The cooling tower overcomes the difficulty of procuring a sufficient and suitable supply of cooling water, renders the selection of an industrial site independent of a large water supply and effects great economies.

Such primitive devices as open air cooling ponds, flue towers, and the appliances brought to light by home talent, have proven their inadequacy.

The principle on which the heat in water to be cooled may be transferred to the surrounding atmosphere may be illustrated by the following:

#### **WET BULB TEMPERATURE.**

If a thermometer with its bulb surrounded by a wetted piece of muslin or other material is whirled rapidly in partially dry air, the temperature indicated by the thermometer will gradually be lowered until finally a value is reached where no further decrease occurs. This is known as the wet bulb temperature. As the wetted muslin is really an elementary cooling tower, subjected to unlimited air supply for unlimited time, this wet bulb temperature represents the lowest possible temperature attainable in any type of atmospheric water cooling device.

If the water with which the muslin is wetted is at a temperature above that of the atmosphere, cooling takes place in two ways:

- (1) By the heating of the air;
- (2) By the evaporation of a portion of the fluid.

The first involves the transfer of sensible heat, that is, heat that raises the temperature of the air. The second involves the transfer of latent heat, the energy required for converting a portion of the water into vapor being withdrawn in the form of heat from the remaining water.

At first there will be a flow of sensible heat from the water to the air, heating the air and cooling the water, and there will be a flow of latent heat due to evaporation which will cool the water. When the temperature of the air is reached by the water the flow of sensible heat ceases, but evaporation continues and lowers the temperature of the water below that of the air. A flow of sensible heat then begins from the air to the water, cooling the air and tending to heat the water.

The wet bulb temperature is the temperature at which the outflow of latent heat from the water is exactly balanced by the inflow of sensible heat and equilibrium exists. This must not be confused with the dew point which is the temperature at which the air—correctly speaking, the space—would be saturated by the moisture actually in it.

The wet bulb temperature cannot reach the dew

point because of the flow of sensible heat from the air to the water, and corresponds to the dew point only when the atmosphere is saturated.

It will be observed from the action of the wet bulb that efficient cooling is dependent largely on the transfer of latent heat, and it is this factor that accounts for the high efficiencies attained by modern cooling towers, and permits of their cooling water to a temperature below that of the air.

In the commercial cooling tower considerations of first cost do not permit of exposing the water to unlimited amounts of air for an unlimited time, so that the wet bulb temperature is not actually attained, but is approached more or less closely depending upon the requirements of service.

---

#### THE LOAD FACTORS UPON A COOLING TOWER.

One important consideration in this theory of heat transfer is the velocity of the air passing over the water, the heat transfer increasing rapidly with increasing air velocity. In other words, the prevailing winds in any locality where a tower is placed will have a very definite effect on cooling. These winds will also have a very definite and positive effect on the strains imposed upon the tower. These stresses, due to windage, or the pressure of the wind or gale against the tower constitutes one of the two chief loads that the tower must with-

stand. The other load factor is the direct load of the mass of water constantly carried on the tower.

The importance of these features will be reverted to later.

---

#### RELATIONSHIP OF THE PARTIES.

##### THE SHELL OIL COMPANY'S MARTINEZ TOWERS IN 1915.

Plaintiff seeks to make capital out of a transaction some years ago when the defendant purchased two towers from the plaintiff's predecessor, Mitchell-Tappen Co., in the usual and ordinary course of business and resold them and erected them for the Shell Oil Company at Martinez, in 1915, all with the knowledge and consent of plaintiff's interests; also that a year or so later these towers were extended or enlarged by defendant but *without* using any of the patented features that enter into the plaintiff's patent in suit.

The facts in regard to this transaction are briefly these: In the fall of 1914 defendant, C. F. Braun & Co., received a letter from the Alberger Pump & Condenser Company, also manufacturers of cooling towers, that they had an inquiry from the Shell Oil Company (R. 308-310). The Alberger Company letter with the Shell Company letter attached being in evidence as defendant's Exhibit "RR."

It will be observed that this letter of the Shell Oil Company to the Alberger Company of March

29, 1915, is a duplicate of the letter of same date sent to the Mitchell-Tappen Company, predecessor of the plaintiff. Plaintiff's Exhibit No. 17. On receipt of this inquiry by Mr. Braun and knowing that the Alberger Company did not build the type of tower that the Shell Company wanted, Mr. Braun communicated not only with the Mitchell-Tappen Company but with other cooling tower companies, including the Stocker Company.

Mr. Braun says (R. 309-310):

"A. I remember particularly the Stocker Company; I believe there were others; I am unable to recollect their names.

\* \* \* \* \*

"A. I remember this Stocker catalog in response to my inquiry to Stocker for a cooling tower to fulfill the requirements of the specifications of the Shell Company. I received it approximately April, 1915.

"Mr. TOWNSEND. I offer this catalog in evidence as Defendant Exhibit SS."

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**DEFENDANT FAMILIAR WITH THE ART OF COOLING TOWERS LONG BEFORE IT EVER HEARD OR KNEW OF THE PLAINTIFF.**

Continuing Mr. Braun says (R. 208):

"Among the people that we did considerable business with was the Alberger Pump & Condenser Company, which built condensers, cooling towers, centrifugal pumps, and like apparatus. We built for the Standard Oil Company a large cooling tower, which we purchased from



the Alberger Pump & Condenser Company and erected; that was erected at Richmond.”

And, again (R. 211):

“I have been very familiar with the heat transfer problems, and I have made a specialty of heat transfer apparatus, for transferring heat from one fluid to another, and early in 1915, I presented a paper on the subject to the American Society of Mechanical Engineers, dealing particularly with heat transfer in a condenser.”

Although the Braun Company and the Mitchell-Tappen Company had been in desultory correspondence in regard to cooling towers from as early as November, 1914, and although Braun had already been advised by the Alberger Pump & Condenser Company of the Shell Oil Company inquiry and Braun was active in following up this inquiry, it was not until April 21st, 1915, that the Mitchell-Tappen Company, by Coffey, advised Braun that the Mitchell-Tappen Company had also had an inquiry from the Shell Oil Company for towers.

The point that is to be noted is that it was not the plaintiff at all that first put the defendant in touch with the Shell Company business. *It was the defendant, however, who, by reason of its engineering reputation, secured the business from the Shell Oil Company and enabled the plaintiff to share in the profit of the transaction.*

It is regrettable that the plaintiff could not have recounted the transaction in its true light and not

sought to besmirch the reputation of the defendant or its president, Mr. Braun, and otherwise to make misrepresentations in regard to what was a perfectly regular business matter.

---

DEFENDANT NEVER AN AGENT OF PLAINTIFF.

A desperate effort was made by plaintiff to show the relationship of *agency* between the plaintiff and the Braun Company respecting the Shell Oil Company towers, but all the testimony, including the correspondence in evidence, show that these were outright sales of towers from the plaintiff direct to the defendant, and that the defendant, as erecting engineers, assembled and erected the towers for the Shell Oil Company.

Thus Braun, called as a witness for the plaintiff, says (R. 151):

“I *purchased* two towers from them.

\* \* \* \* \*

“I *purchased* two towers and parts for two towers from them, and sold those parts.

\* \* \* \* \*

“A. I mean to say that *we contracted with the Shell Company for a cooling tower, and we purchased* part of that tower from Mitchell-Tappen Co., and other parts elsewhere.

\* \* \* \* \*

“A. I mean that we purchased lumber for the tower locally.

\* \* \* \* \*

“A. The Cooling Tower Company supplied

the drawings; it was part of our order that they should supply the drawings.”

(Italics ours).

The drawings were returned to the Mitchell-Tappen Co. (R. 153):

“Q. Have you the erection drawings for this tower?

“A. No, they were returned to the Mitchell-Tappen Company.

“Q. They sent you extra copies, though, didn’t they?

“A. All drawings were returned to the Mitchell-Tappen Company.”

Braun testifies (R. 171):

“Mr. FOULDS. Q. Prior to the time you started in this cooling tower business you were merely selling agents for others, were you not?

“A. No, *we were not agents; we were construction engineers; we bought the products and sold them. We were not agents.*

\* \* \* \* \*

“Q. You were selling goods for others?

“A. *We were buying and selling.*

\* \* \* \* \*

“A. We were designing plants, buying and selling.”

(Italics are ours).

The plaintiff’s witness, Phillips, admits that these towers were sold direct to C. F. Braun & Company. Thus (R. 112-113):

“XQ. 105. When was it that you sold the two Shell Oil Co. towers that you have testified about?

“A. In May, 1915.

“XQ. 106. To whom were those sold by your company?”

“A. *They were sold to C. F. Braun & Co.,* that is we entered into arrangements with C. F. Braun & Co. to buy the lumber locally, and the metal parts of the tower from us in New York.

“XQ. 107. *And the Braun Co. paid you* for such portions of the towers as you furnished?”

“A. Yes.

“XQ. 108. Have you the contract or letters covering the contract in regard to the purchase by Braun of those two towers?”

“A. I have a telegram from the C. F. Braun & Co. dated May 10th, 1915, received by us on May 11th, constituting the order.” (Italics ours.)

This telegram is in evidence as Plaintiff's Exhibit “27” being dated May 10th, 1915, and reading as follows:

“Enter our Order M one covering parts for fourteen hundred gallon tower for Shell Company including steel frame work field bolts and rivets regulating and controlling valves or other devices cast iron distributors three complete sets plans all FOB New York twenty one hundred eighty one dollars confirming order by mail please mail drawings immediately with sufficient data for constructing concrete foundations and collecting basin of concrete or wood towers located on ground quickest possible delivery requested believe we can secure order for second unit now if any inducement offered wire reduction you will make if order for second duplicate unit placed now.

C. F. Braun and Co.

“May 11 540 AM”

This order was accepted by the Mitchell-Tappen

Company, as seen by their telegram to Braun dated May 11th, 1915 (Plaintiff's Exhibit No. 28).

The following day (May 12th, 1915,) as seen by Plaintiff's Exhibit No. 29, Braun wired the Mitchell-Tappen Company that the Shell Company had *given the Braun Company an order* for two towers, with a request to change their order accordingly. This revised order was acknowledged and accepted by the Mitchell-Tappen Company by Plaintiff's Exhibit No. 30.

Under date of May 13th, 1915, the transaction was confirmed on the part of the Mitchell-Tappen Company by order letter Plaintiff's Exhibit No. 31, wherein the Mitchell-Tappen Company stated to C. F. Braun & Company:

“We wish to compliment you for your prompt way of handling these cooling tower orders, and trust that both you and ourselves will find California a profitable place for our business.”

In due course the towers were delivered to the Braun Company, paid for by the Braun Company and erected by the Braun Company for the Shell Oil Company, and in turn the Braun Company was paid by the Shell Oil Company.

Nevertheless on July 1st, 1918, the present plaintiff, disgruntled at Braun's failure to do further business with it and in an effort to injure Mr. Braun, wrote to the Union Oil Company a letter



(Plaintiff's Exhibit No. 19) in which the plaintiff said:

“We had Mr. Braun handle for us the California end of our negotiations in connection with the first towers *we built* for the Dutch Oil interests at their Shell Company plant, at Martinez, Cal., but our experience in that case did not justify our making him our regular representative, and later, he tried to procure additional business from the same people by using our designs.

We have straightened out the matter with the Dutch Oil interest, who *have become very good customers* and friends of ours, and we thought that Braun had discontinued his Prussian methods after this adventure, but the report that we received leads us to believe that in the case of your Company and one other, he has been *using his former connection with our Company to procure business for cooling towers built on our patents.*” (Italics ours.)

This, of course, was a deliberate misrepresentation on the part of plaintiff, in several particulars. As far as shown the Shell Oil Company was never a customer of the plaintiff.

We have not been able to find any justification for the statements contained in plaintiff-appellant's brief on this appeal concerning alleged license and inferences sought to be drawn therefrom. Plaintiff says in its brief (page 24):

“Defendant constructed its first tower under license of plaintiff and thus admitted the validity of the patent.

And, again (page 32):

“The old cooling towers which defendant erected under the license of plaintiff in 1915,”  
\* \* \* etc.

There was a sale. There was never a license except as the right of use and resale that an original vendor passes to the vendee. There was never at any time an admission, direct or implied, concerning the *validity* of any patent of plaintiff.

---

**SHELL COMPANY TOWER—1916 ADDITIONS.**

It appears that later, in February, 1916, the Shell Company desired to erect an addition to one of the cooling towers previously erected by C. F. Braun & Company. The Shell Company accepted the bid of the Braun Company and the addition was made.

In the construction of this addition the defendant did not use the drawings of the Mitchell-Tappen Company but made entirely new detailed drawings; the Mitchell-Tappen Company drawings having been previously returned, as above stated. There were various changes in details of design and construction, particularly in the deck construction, the elimination of the splines of the cooling tower (to which further reference will be made) and the substitution therefor of serrated metal strips which formed the subject-matter of Braun's first patent sued on in defendant's counter-claim, but which patent, as above stated, was later withdrawn.

Of course, at this late date no charge of infringement would lie on the addition that the Braun Company made to the Shell Oil Company tower in the early part of 1916, by reason of the Statute of Limitations, [U. S. R. S. Section 4921], but, as above stated, the evidence utterly disproves any infringing act by defendant, C. F. Braun & Company, in the erection of this 1916 addition. However, plaintiff later seized upon this perfectly legitimate transaction of the Braun Company to injure the lawful business of the defendant. So outrageous were the actions of the plaintiff that in 1918 the defendant, through its counsel, took the plaintiff to task and demanded a retraction of its unjust charges of piracy and the like, with the result that for a considerable period of time, plaintiff assumed a more conservative attitude and left defendant alone, although the plaintiff was at that time invited to institute suit and determine the respective rights of the parties if plaintiff genuinely thought that the defendant was an infringer or had committed any unlawful acts. (For this 1918 correspondence see defendant's answer and counter-claims, Sections XV to XXV, R. 17-35, inclusive.)

The utter lack of foundation for the charges broadcasted at that time by the plaintiff against defendant is emphasized in the depositions of the only two members of plaintiff's organization called to testify in the present suit.

Manifestly their opinions are based merely on suspicion and hearsay. Coffey says (R. 125-126):

“XQ. 128. Did you know of the extension to these Shell Co. towers the time you wrote your letter of July 1st, 1918, to the Union Oil Co.? (Exhibit 19.)

“A. I cannot be positive of this date, but my recollection is that such additions had been reported to me.”

As to the complaint that the defendant had put into its Bulletin the pictures of the towers which it had erected for the Shell Oil Company, there is manifestly nothing irregular in that, since the Bulletin shows that these towers are not claimed to be Braun towers but that they simply illustrate work actually executed by the Braun Company.

There is nothing out of place in defendant's use of pictures of the Shell installation. This is explained by the witness Braun at R. 215:

“Q. Some criticism has been indulged in by plaintiff's counsel of your use of cuts of the Shell 1915 towers in your advertising literature. Will you just tell what use you actually made of those cuts, and how you used them?

“A. I remember that we published a bulletin, and that we used a photograph of the tower that we erected at Martinez; we took these photographs and made cuts of them and showed cuts on one of the pages of this bulletin. We were then operating as construction engineers; we advertised as such, and we did not advertise these towers as being patented by us, or as of our own design.

“Q. They simply were illustrative of work that you had erected?

\* \* \* \* \*

“A. To show work that we had erected as the construction engineers.

\* \* \* \* \*

“Q. Is that a policy that is common with erecting engineers, to point to work that they had done?

“A. I think that it is a very common policy.”

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THE BRAUN PATENT NO. 1,442,784.

The main controversy in this case centers around the validity of the said second Braun patent of defendant, No. 1,442,784.

There is, we believe, no question but that if the patent is valid, as we insist it is, the plaintiff infringed it in the erection of the all-wood tower for the Pasadena Ice Company.

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ASSIGNMENT OF ERRORS (R. 408-409).

Defendant and cross-appellant specifies errors as follows:

That the Court erred:

(1) In dismissing the counterclaim of defendant on Braun patent No. 1,442,784;

(2) in finding that said Braun patent No. 1,442,784, does not involve novelty;



(3) in finding that said Braun patent No. 1,442,784 appeared to be anticipated;

(4) in failing to find said Braun Patent No. 1,442,784 valid and infringed;

(5) in failing to grant injunction restraining the further infringement of said Braun patent No. 1,442,784;

(6) in failing to find that the defendant-cross-appellant was entitled to accounting for damages and profits for infringement of said Braun patent No. 1,442,784.

For logical treatment and correct chronology, it appears advisable in this brief to consider the several matters with which these appeals are concerned in the following order:

- (1) The plaintiff's patent in suit;
- (2) The defendant's patented construction;
  - (a) as to non-infringement of Coffey.
  - (b) as to infringement by plaintiff.
- (3) Unfair and inequitable conduct of plaintiff.

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**THE COFFEY PATENT, No. 1,010,020, DATED NOVEMBER  
28, 1911.**

(See Book of Exhibits—R. 80.)

The Coffey patent, like every other patent, should, of course, be studied in connection with the File Wrapper.

The Coffey patent is primarily for a steel tower, in which the steel columns carry the entire load and the structure depending for bracing and strength on arrangement of tie-rods and cross-bars which, however, are not shown in the patent, but which entered into every structure ever erected by the plaintiff, until quite recently when plaintiff adopted the all-wood tower construction of defendant, as will be later pointed out.

It is to be borne in mind at all times that the Coffey tower and the plaintiff's patented towers, except the one at the Pasadena ice plant and shown to infringe Braun, are all of the structural steel, cross-tie rods reinforcement type.

The plaintiff's cooling tower, as well as the defendant's cooling tower, is what is known as the "atmospheric type" of cooling tower as distinguished from the "forced draft" type. It is not to be understood that atmospheric cooling towers originated with the plaintiff. All plaintiff did was to improve on the *steel structure* type.

For instance, in connection with the prior art offered on behalf of defendant (R. 250 and following) there appeared to be a number of prior patents in evidence showing that the general idea of cooling water by the wind blowing through and across the tower was quite ancient. This ancient art is evidenced by the volume of fourteen patents forming defendant's Exhibit "II" (R. 253), besides the various other patents offered in evidence by defendant (R. 73).

DIFFERENCES IN PRINCIPLE BETWEEN COFFEY AND  
BRAUN.

While frequent reference herein is made to the fact that defendant's tower is an all-wood tower, it is to be understood, of course, that the invention of defendant, as illustrated by the Braun patent, relied on in the counter-claim, does not rely on the fact that the Braun tower is an all-wood tower as distinguished from the steel tower of the plaintiff and the prior art.

*While Braun has found wood to be the most satisfactory, the Braun invention resides in the particulars previously referred to, to-wit: that is of so constructing and arranging the structural elements of the tower with the deck-supporting beams of the tower not only extended horizontally beyond the vertical posts, but so connecting them to the louvers at the top of the latter, with the louvers in turn so anchored to the tower at their inner bottom ends, that the resulting structure is a trussed structure and the deck members become what are termed "restrained beams," with the result that not only is a cheaper structure produced by Braun and a more durable one, 'due to the added rigidity, but the extensions of the deck members, with their lower connections, provide a style of external bracing so that the interior of the tower is practically free for cooling and water distribution purposes without interfering with the efficiency of the tower.*

## PLAINTIFF'S ADMISSION AS TO PRIOR ART.

Plaintiff's predecessor, by its secretary-engineer Phillips in a letter written November 27th, 1914, to defendant (Plaintiff's Exhibit No. 4), acknowledged the contribution of the prior art to their tower and emphasized their "steel construction" type of tower. Thus:

*"Before our tower was placed on the market, both wooden and steel towers were in use. Wooden towers lasted pretty well, except where screws and nails were used for fastenings, but due to swelling and shrinking they soon get out of level with a consequent loss in efficiency. Steel towers maintained their level and the frame lasts, but the pans or drip bars coming in contact with the water soon rust out and the tower is noisy. Our tower has a steel frame and swamp cedar drip bars.*

*"We have thus taken the best and most expensive parts from both the wooden and steel towers and added to this our patented cast iron distributing system to which the superior efficiency of our tower is largely due. This has made our prices somewhat higher than our competitors, but additional orders from our customers have shown a policy of quality and efficiency to be correct."* (Italics ours.)

---

 ART PRIOR TO COFFEY.

Among the early patents on the subject are the following:

*Windhausen*, No. 111,292, January 24, 1871, (defendant's Exhibit "II-1"), particularly Figs. 9 and 10.



*Hanisch*, No. 477,755, June 28, 1892 (defendant's Exhibit "II-2"), particularly Fig. 5, showing another arrangement of baffles and deck boards for affecting cooling.

*Fischer et al.* No. 649,573, May 15, 1900 (defendant's Exhibit "Y") (see particularly Fig. 6).

This latter patent (sheet 2 of the drawings of which are reproduced opposite), is important as showing the slatted deck (Fig. 6), with the slats staggered, and also splines for holding certain members (see Fig. 4). (This spline is the outstanding feature of plaintiff's patent but has never been used by defendant in any of its towers.)

Manifestly there would be no invention in Fischer in making the "splines" of his Fig. 4 *wider* so as to spread or space the adjacent grooved members.

*Stocker*, No. 700,990, May 27, 1902 (defendant's Exhibit "II-3").

This patent is interesting as showing a trough distribution for the water, with the trough dammed at the end to cause the overflow.

*Wheeler*, No. 707,042, August 12th, 1902 (defendant's Exhibit "II-4").

See particularly Fig. 2 and the statement of the inventor that the invention relates to cooling towers, especially to water cooling towers used in connection with steam plants operating with a condensing sys-



G. K. FISCHER & F. KLEPETKO.  
STRUCTURE FOR COOLING FEED WATER, &c.

(Application filed July 6, 1899.)

2 Sheets—Sheet 2.

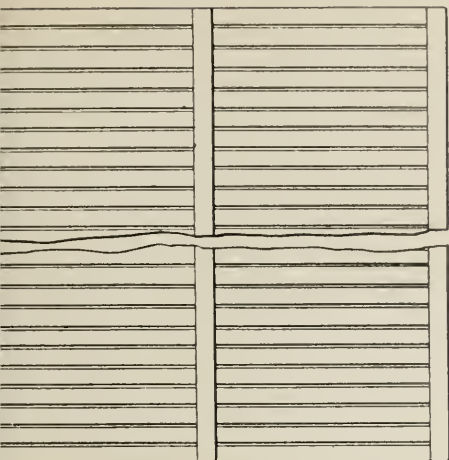


Fig. 7.



Fig. 8. C

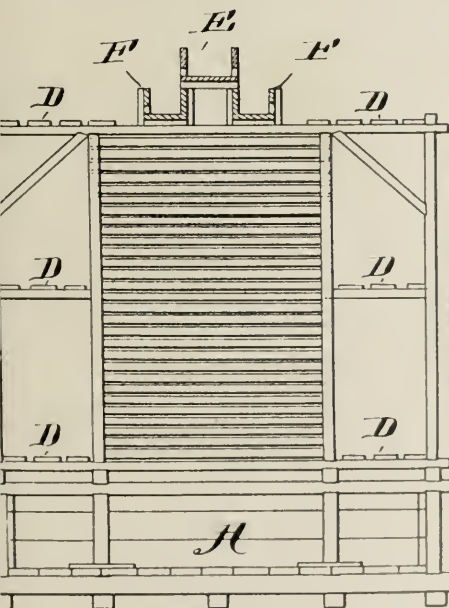


Fig. 3.

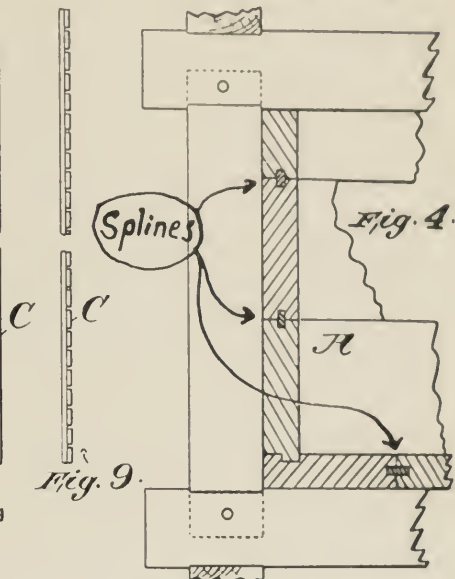


Fig. 4.

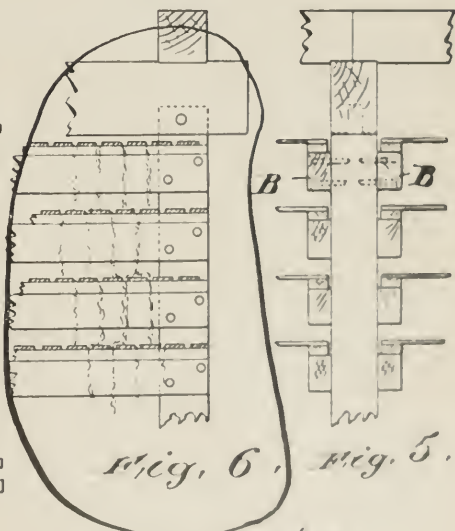


Fig. 5.

Deck shaft

Witnesses,  
W. Benjamin  
Fischer & Co. Dors

Inventors  
George K. Fischer and Frank Klepetko  
by [Signature]



tem, and more particularly to the open or non-enclosed type of this class of towers.

*Ostendorff*, No. 661,192, November 6th, 1900  
(defendant's Exhibit "II-6").

This is also an open type of cooling tower; the patentee saying:

"My invention is directed particularly to improvements in means for cooling water by natural aeration and evaporation caused by allowing the water to fall in fine drops or streams through the air."

*Ostendorff*, No. 697,160, April 8th, 1902, (defendant's Exhibit "II-7").

*Ostendorff*, No. 836,702, November 27th, 1906,  
(defendant's Exhibit "II-8").

*Burhorn*, No. 772,780, October 18th, 1904, (defendant's Exhibit "II-9").

In this patent the drip bar is secured at the frame ends and in Fig. 3 the *longitudinal groove on the under side*. (This longitudinal groove on the under side is one of the features emphasized in the Coffey patent in suit, but never used by the defendant.)

*Burhorn*, No. 961,100, June 14th, 1910, (defendant's Exhibit "II-10").

*Burhorn*, No. 1,014,371, January 9th, 1912,  
(applied for November 26th, 1910), (defendant's Exhibit "II-11").

Burhorn and Ostendorff were quite prolific inventors in this art. Both the witness Coffey and the

witness Phillips for plaintiff testify to their indebtedness to those gentlemen. Thus Mr. Phillips says (R. 88):

“I was with Edwin Burhorn for about seven years, during all which time Edwin Burhorn was making and selling cooling towers.”

And Coffey, plaintiff's engineer, says (R. 72):

“I first came in contact with atmospheric cooling I think in 1907 or 1908 through a connection I had with Edwin Burhorn who was then beginning the exploitation of the Ostendorff atmospheric cooling tower, which was, I believe, the first serious attempt to introduce this type of tower in the United States. Ostendorff was one of the pioneer inventors of this type of apparatus.”

Mr. Coffey gives the following general description of plaintiff's type of water cooling tower (R. 74-75):

“The water to be cooled enters a distributing device at the top of the tower. This device in general forms a part of the supply pipe system. After leaving this distributing device, the water enters a deck composed of a series of gutter section wood bars, overflows these bars in an approximately uniform film which flows down the sides of the bar, turns the bottom edge and at the two grooves, is transformed into drops and this is uniformly distributed upon another deck composed of approximately flat top bars.

“A splash is formed on this deck having the appearance of foam and is a very valuable cooling surface, water then drops to another flat top deck and the cycle is repeated from deck to deck until the water finally reaches a pan or basin

from which it flows to the point where it is used. While the water is thus passing from deck to deck in the form of fine drops, and spray, air passes horizontally between the decks, absorbs heat from the water and passes out on the side opposite to which it entered. The water is thus cooled progressively from deck to deck and reaches the final temperature desired in the basin referred to. This is a rough description of the cooling process common to all atmospheric cooling towers."

---

**WOODEN DRIP BARS WERE NOT ORIGINATED BY COFFEY  
NOR PLAINTIFF.**

Thus Coffey testifies (R. 116):

"XQ. 107. Is it not a fact that prior to your patent for the invention set forth in your patent other cooling tower manufacturers were using wooden drip bars in atmosphere cooling towers?

A. Yes.

"XQ. 108. Who to your knowledge were using wooden drip bars prior to your invention?

"A. They were used in what is technically known as slat towers, working on an atmospheric principle.

"XQ. 109. By what concerns were such wooden drip bars or slats used in atmospheric cooling towers prior to the invention of your patent in suit?

"A. They were not manufactured by specialized cooling tower companies, but were erected by the owners. There are a number of examples throughout the West in the stockyards of Chicago, Cincinnati and other places."



THE COFFEY PATENT IS ILLUSTRATED BY THE MODELS—  
DEFENDANT'S EXHIBITS H. I and J.

In describing the Coffey construction Mr. Braun says (R. 199-200):

“These are deck boards grooved, or the deck member, on each side, and secured at each end; and intermediate between the ends are loose splines which space these boards—spline 7 spaces the boards. The object of these splines appears to be to space the boards intermediate the place where they are fastened. These boards are fastened securely at each end to a solid member, and no provision is made for the independent expansion of any one of these boards. These splines serve solely as spacers, as this board cannot expand more than this board without moving this board. These grooves on the bottom are shown on the patent and were used on the first Martinez tower.

“This is more nearly a correct model of the construction used at Martinez, Exhibit ‘I.’ The deck supports actually were approximately 3 feet apart instead of one foot, as shown. These boards are grooved. The boards 6 are grooved on both sides, and have splines 7; the boards are fastened down to the transverse deck-supporting members by nailing. There is no provision, therefore, for independent longitudinal expansion of these boards. The splines serve solely as spacers, providing for no longitudinal expansion, and did not secure the board to the transverse member.”

---

COFFEY ALLEGED INVENTION.

Witness Coffey testifies that there are two features of the patent:

- (1) The groove and spline system.
- (2) The two grooves on the bottom of the drip bar.

Thus (R. 73-74):

“Q. 20. What are the particular advantages of the patent in suit?

“A. The particular advantages are two:

“First. The deck as made up in accordance with the patent is, with the exception of the fastening, entirely wood which experience has shown to be the most reliable material for this purpose. Second: The introduction of wood instead of metal for deck elements, however, brings in certain disadvantages. These are the warping and twisting and general tendency of wood to get out of line. The effect of this is to close up some of the spaces between the deck members and open others wide, thus impairing the distribution through the tower and so lowering its efficiency. To correct this defect, and maintain a uniform opening between the deck members, *the groove and spline system of spacing as shown in the patent was devised.* This I consider the second advantage. The third advantage is *the two grooves shown at the bottom of the drip bar*, the effect of which is to cause the water falling on each bar to divide up *into two lines of drops instead of one*, thus greatly increasing the subdivision of the water, another factor upon which the efficiency of the apparatus depends.” (Italics ours.)

And, again (R. 81), he emphasizes these two features as follows:

“XQ. 49. Please make a comprehensive statement of all features of plaintiff's patent 1,010-

020 that you find to be present in the cooling towers made by the Cooling Tower Co.?

“A. *The splines and the grooves. On the bottom of the bars.*” (Italics ours.)

This is further emphasized at (R. 82):

“XQ. 55. And what features connected with the drip bars do you consider to be the device of the patent in suit?

“A. The method of fastening and holding the bars in place.

“XQ. 56. And what is that method that is the device of the patent in suit?

“A. That device is the splines 7, Fig. 4, and pins or screws 10, Fig. 6.”

Coffey says that his company has never made a cooling tower with drip bars spaced apart by any other means than the wooden splines fitting within the grooves (R. 124):

“XQ. 141. In all the cooling towers made by your company and its predecessor since your connection with it, have the drip bars been connected together or spaced apart by means of wooden splines fitting into grooves on the vertical walls of the adjacent drip bars?

“A. The best of my knowledge and belief, they have.”

---

#### DEFINITION OF A SPLINE.

(R. 189-190):

“The COURT: Where does that name come from? Is that a common name?

A. A spline is a very common name for a loose piece of wood used to join together two boards, such as, for instance, floor boards. You

are doubtless familiar with the ordinary tongue-and-groove construction in which floors are usually made, one member having a groove and the other having a tongue, and this being the tongue member and this the groove, the common use for the spline is where it is desired to join together two tongued members; then a loose piece is put in there like that (illustrating).

“Mr. TOWNSEND: You might explain it as a matter of record from the Coffey patent in suit, No. 1,010,020.

“A. The Coffey patent shows that construction, the loose spline; Fig. 4, No. 7, shows such a loose spline—Fig. 7 and Fig. 8.”

(R. 341):

“Mr. TOWNSEND: I want to call your Honor’s attention for a moment to an authoritative definition of a spline. I have Knight’s Mechanical Dictionary, and I have had a little figure, in connection with the definition, reproduced on a piece of yellow paper here, with also the definition of ‘spline,’ as it appears in the Standard Dictionary, and just for the convenience of the record I am going to ask that this paper be marked Defendant’s Exhibit ‘TT.’”

(The document was marked Defendant’s Exhibit “TT.”)

The definition and cut from Knight’s Mechanical Dictionary is reproduced here.

**Spline.** (*Machinery.*) A rectangular key fitting into a seat on a shaft and occupying a groove in the hub of a wheel, which slips thereon longitudinally, but rotates therewith. A feather.



**Splin'ing-ma-chine!** (*Metal-working.*) One for cutting key-seats and



FILE WRAPPER OF COFFEY PATENT IN SUIT No. 1,010,020,  
 DATED NOVEMBER 28th, 1911 (Defendant's Exhibit "DD"  
 (R. 252).

The following citations of the prior art appear in the File Wrapper (Defendant's Exhibit "DD"), and are in evidence as Exhibits "EE" to "HH," inclusive, and Exhibit "Y":

Cooper, 140,680, July 8, 1873;  
 Mills, No. 463,702, November 24, 1891;  
 Southwick, No. 303,334, August 12, 1884;  
 Andrews, No. 544,202, August 6, 1894;  
 Fischer, No. 649,573, May 15, 1900 (see cut,  
*supra.*)

By reference to the Coffey file wrapper it is seen that original claims 1, 2, 3 and 5 were rejected on these references; the Examiner saying:

*"Fischer shows decks in water cooling tower consisting of parallel drip bars slightly spaced apart.*

*"Southwick shows a series of bars spaced apart by blocks to allow water to drip between the bars. Andrews shows bars provided with grooves in their sides and spaced apart by splines fitting in the grooves. Cooper shows the use of splines, for holding together a series of bars, and Mills shows that it is old to provide spacing blocks at intervals throughout the length of a series of bars. In view of the various uses of splines and spacing blocks, as shown in the above patents, no invention would be involved in providing the bars of Fischer with grooves and splines at intervals along the length of the bars.*



“The description should be amended to set forth the function or advantage of the specific means for spacing the bars apart as set up in the claims.” (Italics ours.)

Original claims 1 and 2 were as follows:

“1. In a device of the class described, a deck consisting of grillage bars, the adjacent bars being splined together at intervals throughout their entire length.

“2. In a device of the class described, a deck consisting of parallel drip bars with space in between the bars, short splines connecting the bars at intervals.”

These drains were rejected and never allowed.

It is thus apparent that the broad idea of any spacing and securing means for drip bars were disallowed. From the cases cited it is seen that it is elementary: that the cancellation of a claim from its application after it was rejected by the Patent Office for want of novelty a patentee cannot afterwards contend that some other claim of his patent shall be construed to be co-extensive with the one rejected. See also:

*Royer v. Coupe*, 146 U. S. 532;

*Corbin v. Eagle*, 150 U. S. 40;

*Scale Co. v. Automatic*, 204 U. S. 609.

To obtain an allowance of the claims relating to splines it was necessary to specify (a) that “the adjacent bars separately fastened to the frame at each end” and (b) as being “loosely” splined to-

gether at intervals. These limitations appear in claims 1, 2, 3, 5 and 6 of the patent. Claim 4 calls for the specific form of the drip bar "having a *curved top, two grooves on the bottom and a groove on each of the vertical sides.*"

---

DEFENDANT HAS NEVER USED THE SPLINE. HAS  
SEPARATE PATENT ON HIS BRASS RIBBON.

Defendant does not use a "spline" in any sense of the word: Defendant's brass strap is covered by a subsequent and separate patent (Fig. 3, 1st Braun patent, Exhibit B), and therefore is not now an equivalent and could not be considered an equivalent of Coffey's *spline* in 1911 when Coffey applied for his patent. Besides Braun's *slats* are not "fastened at the ends". Braun's bars are *loose* to allow of *individual lengthwise* expansion; whereas Coffey's bars are set in a *rigid frame fastened at sides and ends* and his drip bars and frame can only expand together as a *unit*.

That the term "spline" has a very definite meaning in the art is seen by reference to the Burhorn patent, No. 1,092,334, dated April 7th, 1914 (Defendant's Exhibit "II-12"), which patent shows in Fig. 5 grooved slats with loose "splines" (numbered 29), and concerning which Burhorn says on page 2 of his patent:

" 'And the slats being separated by splines 29 set between the slats 27, 27. In this form of

deck I preferably provide a longitudinal channel 30 in the under side of the slats 27, whereby the water will be caused to fall from the sides of the slats instead of seeking the center, thus accomplishing the desired division of the water into fine spray.' ”

In offering this patent, counsel for defendant said (R. 257):

“Mr. TOWNSEND: \* \* \* So that there will be no misunderstanding, your Honor will recall this; I only put this in for this purpose—it cannot be used for anticipation; it is used for the purpose, rather, of explaining the use of splines in this art. The patent was applied for shortly after the plaintiff’s patent was issued. For some unaccountable reason which is not apparent from the face of this patent—I am curious to know whether there was any interference—maybe Mr. Foulds can enlighten us—between Coffey and Burhorn.

“Mr. FOULDS: There was none.

“Mr. TOWNSEND: It was applied for a few months after Coffey, but it shows almost the identical construction of Coffey, with the splines and the housing, and it is interesting as showing what splines meant to two men who were very closely associated about that time. I have no inference to draw or to offer, and I merely put this in on account of the peculiar verbiage that we find there.”

Whether Burhorn borrowed his splines from Coffey or Coffey borrowed his splines from Burhorn is not material to this case, but the strange circumstance of the two patents describing the same

structure and using the same thing, removes, as we will see later, every vestige of any basis for the charge of infringement.

---

NON-INFRINGEMENT BY BRAUN.

It is not clear either from plaintiff's record or plaintiff's brief what particular tower or towers manufactured or erected by the defendant at any time are claimed to infringe; particularly it is uncertain whether the plaintiff is now claiming that the 1916 addition, erected more than six years prior to the beginning of this suit, is claimed to infringe or that the charge of infringement is directed to the patented wooden tower construction of defendant, such as it is now building.

It is quite plain that the plaintiff has failed to show any specific tower which has been erected or sold or used by the defendant which plaintiff claims infringes, much less any tower made or sold or used by this defendant within this district.

The burden of proof of infringement is upon plaintiff.

*Mitchell v. Tilghman*, 86 U. S. 287, 22 L. Ed. 125;  
*Price v. Kelly*, 154 U. S. 669; 26 L. Ed. 634;  
*Seymour v. Osborne*, 78 U. S. 516; 26 L. Ed. 33.

THE PROOFS SHOW AN UTTER LACK OF FOUNDATION FOR  
BRINGING SUIT AGAINST THE DEFENDANT ON THE  
COFFEY PATENT.

Both Coffey and Phillips, the two persons connected with the plaintiff, supposing to have knowledge of the matters set out in the bill of complaint admit a lack of knowledge of what the defendant actually did upon which the charge of infringement was manifestly based.

Thus Coffey says, R. 78, in answer to Qs. 31-32:

“I know arrangements were made with Mr. Braun but *I did not personally carry on negotiations, the details of which I do not remember, and therefore cannot answer this question in detail.*

\* \* \* \* \*

“The treasurer, *Mr. Phillips*, has charge of that transaction.” (Italics ours.)

Phillips, while admitting he had charge of the correspondence (Q. 14, R. 89), admits that the towers so erected for the Shell Oil Company were sold to C. F. Braun & Co. by plaintiff, with the full knowledge of plaintiff (XQs. 106-107, R. 112-113).

The 1916 addition to the original Shell Oil Company tower at Martinez by the Braun Company did not embody the splines of the Coffey patent or any of the other patented features; the Braun Company employing a system of angle bars laid over the slats with the punched out bars of the angles fitting between the slats to space them (see Braun R. 203).



The securing means employed by Braun for holding down and spacing the deck on the Shell Oil Company addition is thus described by Braun (R. 203):

“The decks were held down—an angle-iron was punched at intervals so that a part of the wall of the angle would extend down from the angle, remaining part of the angle, would project from it possibly half an inch. That angle was laid on top of the deck board and secured by nails or lag screws to the transverse deck-supporting members. The punched-down portion of the angle served as spacers for the deck.”

[This construction is illustrated on the opposite page.]

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PLAINTIFF IGNORANT OF DEFENDANT'S METHODS OF  
DECK CONSTRUCTION.

See Coffey (R. 120):

“XQ. 128. Have you personal knowledge of the method that was used to connect together the slats or drip bars in the two Shell Oil Co. towers erected by Braun in 1915? A. *No.*

“XQ. 129. Have you personal knowledge of the method that was used in connecting the slats or drip bars of the additions or enlargement of these towers? A. *No.* (Italics ours.)

Thus Phillips on cross-examination admits his company based this misrepresentation as to what Braun did, on suspicion (R. 124-5):

“XQ. 123. Have you knowledge of the method used by Mr. Braun in connecting and spacing the part the drip bars in the original

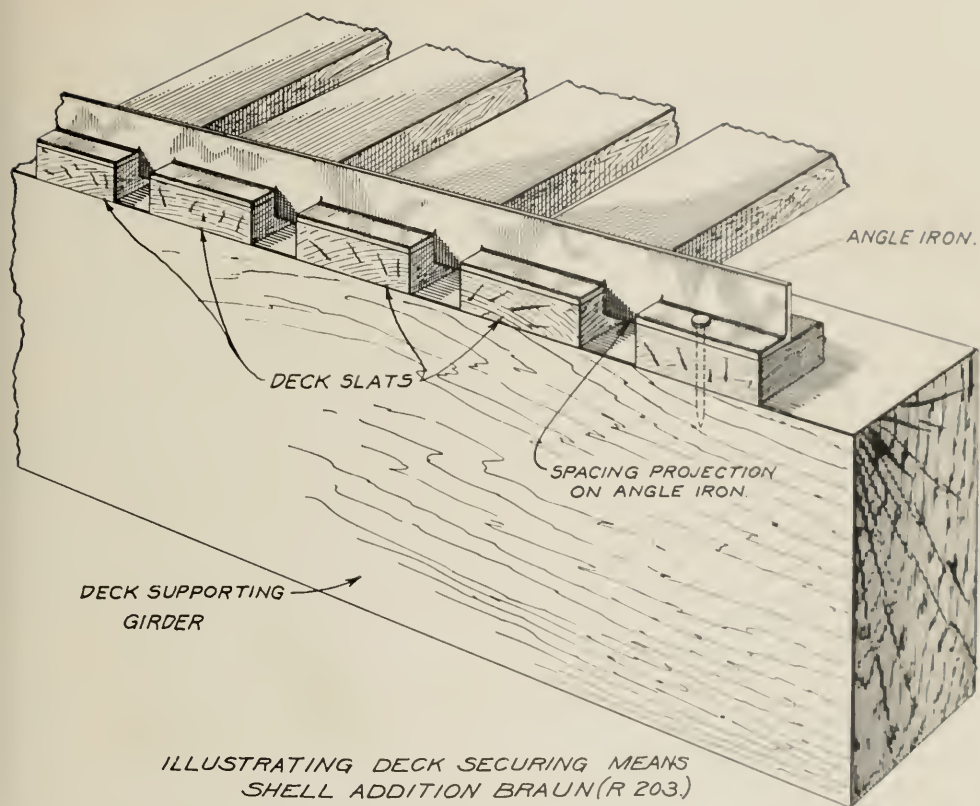
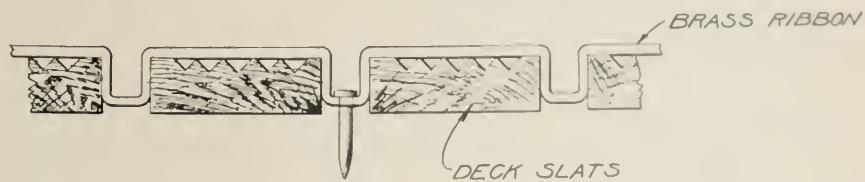


FIG. 3 OF BRAUN PAT. 1,334,515, MAY 23, 1920.





two Shell Oil Co. towers erected in 1915, material for which he purchased from your company?

A. *I have not seen the towers. My knowledge on the subject being derived from the fact that the towers are supposed to be built in accordance with our plan. Instructions for erection having been sent to Braun.* (Italics ours.)

This testimony recalls the admonition of the Court of Appeals in *Krupp v. Midvale*, 191 Fed. 588, 591:

“We deem it proper, however, to say for the guidance of patent practitioners in this circuit that it should be borne in mind that *infringement is not only a question of fact*, but is a tort or wrong, the burden of establishing which, as in all torts, clearly rests on those who charge such wrong. *The absence of actual fact proof is not met by the presence of expert speculations no matter how voluminous.* In this particular case the whole superstructure of the vast mass of expert testimony, in the last analysis, depends on what the Midvale Company *did* when making armor-plate as testified to by Leonard and Ross. They were the only witnesses who saw and testified thereto, and, when the judge below became convinced that these two witnesses did not prove facts which showed infringement, he rested, and could rightfully rest, his decision on that ground.” (Italics ours.)

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THE SHELL OIL COMPANY TOWER ADDITION NOT AN INFRINGEMENT EVEN HAD IT BEEN DONE WITHIN THE STATUTORY PERIOD.

The loose way in which plaintiff has put in its case and its failure to make clear wherein a definite

charge of infringement lies, makes it incumbent upon defendant to discuss the Shell Company addition so that there may be no possible misconstruction put upon any of the acts of the defendant at any time.

Likewise the plaintiff's position is obscure as to what claims of the Coffey patent it is contending is or are or have been infringed. The bill of complaint in Paragraph 5 (R. 3) alleged infringement by the defendant "in the *Southern District* of California and elsewhere in the United States of America" of the claims of the patent in general, without specifying which claims.

On final hearing plaintiff limited the charge of infringement to claims 3 and 5.

In its present brief on appeal (page 14) the charge of infringement is apparently limited to claim 5, which is the only one specifically referred to and quoted.

Assuming that the charge of infringement now will include claim 3, as well as claim 5, it is to be pointed out that these claims are what is known as "combination claims" and the rule of construction of combination claims in the light of Patent Office actions is to apply.

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THE CLAIM THE MEASURE OF THE MONOPOLY.

See Judge Morrow in *Bowers v. Pacific Coast Dredging & Reclamation Co.*, 99 Fed. 745, 747 (C. C. A. 9th Cir.):



“It is true that every patent is *prima facie* evidence of the novelty of the invention described in the patent, but the invention patented is the invention set forth in the claim, and that only. *Keystone Bridge Co. v. Phoenix Iron Co.*, 95 U. S. 274, 278, 24 L. Ed. 344; *Railroad Co. v. Mellon*, 104 U. S. 112, 118, 26 L. Ed. 639; *Manufacturing Co. v. Greenleaf*, 117 U. S. 554, 559, 6 Sup. Ct. 846, 29 L. Ed. 952.”

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#### CONSTRUCTION OF CLAIMS.

“As patents are procured *ex parte*, the public is not bound by them, but the patentees are. If the office refuses to allow him all he asks, he has an appeal. But the courts have no right to enlarge a patent beyond the scope of its claim as allowed by the Patent Office, or the appellate tribunal to which contested applications are referred. When the terms of a claim in a patent are clear and distinct, as they always should be, in a suit brought upon the patent, the patentee is bound by it. *Keystone v. Phoenix*, 95 U. S. 274; 24 L. Ed. 344.” (Macomber p. 191.)

“the patent cannot be extended beyond the claim. That bounds the patentee’s right.—*American v. Fiber Co.* 90 U. S. 566; 23 L. Ed. 31.” (Macomber p. 190.)

“An application for a patent which has been rejected, and which is subsequently amended to conform with the objections of the patent office, is strictly construed.—*Norton v. Jensen*, 90 Fed. 415; 33 C. C. A. 141.” (Macomber p. 196.)

For other cases in this Circuit on Influence of the File Wrapper see:

- Wheaton v. Norton*, 70 Fed. 835;  
*Schultheiss Co. v. Phillips*, 264 Fed. 971;  
*Selectasine Co. v. Prestograph*, 282 Fed. 223.

---

COFFEY'S CLAIMS 3 and 5.

Claim 3 as a combination, analyzed, is as follows:

- "3. In a device of the class described
- (1) a deck
    - (a) consisting of drip bars
    - (b) securely fastened at each end,
    - (c) with space in between the bars;
  - (2) the adjacent bars being *loosely splined* together at intervals throughout their entire length." (Italics ours.)

Claim 5 is as follows:

- "5. In a device of the class described
- (1) a deck
    - (a) consisting of drip bars
    - (b) *individually fastened at each end*,
    - (c) with space in between the bars;
  - (2) the adjacent bars being *loosely splined* together at intervals throughout their entire length." (Italics ours.)

Walker says (Section 349):

"Omission of one element or ingredient of a combination covered by any claim of a patent, averts any charge of infringement based on that

claim, whether or not the omitted ingredient was essential to the combination of the patent, and whether or not it was necessary to the operativeness of the device. And it makes no difference that another element is made to do the work of itself and of the omitted element. A combination is an entirety. If one of its elements is omitted, the thing claimed disappears. Every part of the combination claimed is conclusively presumed to be material to the combination, and no evidence to the contrary is admissible in any case of alleged infringement. The patentee makes all the parts of a combination material, when he claims them in combination and not separately.”

The actions in the Patent Office against the Coffey claim and the insertion of the word “loosely” and other limitations are binding on the plaintiff within the doctrine of the cases referred to above; attention being particularly directed to the *Selectasine Case* decided by this Court, 282 Fed. 223.

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**FUNCTIONAL STATEMENTS IN A CLAIM NOT TO BE  
DISREGARDED.**

*Westinghouse v. Brake Co.*, 170 U. S. 537; 18 Sup. Ct. 707; 42 L. Ed. 1136, announces the doctrine:

“But, after all, even if the patent for a machine be a pioneer, the alleged infringer must have done something more than reach the same result. He must have reached it by substantially the same or similar means, or the rule that the function of a machine cannot be pat-

ented is of no practical value. To say that the patentee of a pioneer invention for a new mechanism is entitled to every mechanical device which produces the same result is to hold, in other language, that he is entitled to patent his function."

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DEFENDANT'S UNEQUIVOCAL DENIAL OF ANY USE OF  
EITHER SPLINES OR GROOVED SLATS CALLED FOR BY  
THE COFFEY PATENT.

Thus Braun (R. 212):

"Q. Referring to plaintiff's patent in suit, Mr. Braun, or to the model, Exhibit I, have you ever employed slats with underneath grooves such as shown in Fig. 2 or Fig. 3, or any of the other figures of the patent, 1,010,020, which said grooves are shown, or any grooves at all, as may appear on the under side of the slats of the model Exhibit I? A. No.

"Q. What has been the construction of your slats, as far as the underneath portion is concerned? A. Plane surface.

"The COURT. What purpose is served by these grooves on the under side?

"Mr. FOULDS. They separate the water running down. I will say when the water runs down, by capillary attraction it comes down in a solid stream, and the groove divides it into two streams.

"Mr. TOWNSEND. Q. Have you ever used side grooves such as appear in Figs. 2 and 3 of the patent in suit, or any grooves at all upon the sides of the slats? A. No."

(R. 213):

"Have you ever used in your deck construction any other construction than such as you

have described and illustrated by the models that you have referred to?

“A. Only some decks that we nailed down without any other method of spacing or securing them.

“THE COURT. You mean since the time that you added this addition at the Shell Company that your installation has been practically the same as shown by your large model?

“A. Yes, with the exception of when we nailed the boards down.”

Walter Hagenbuch, called for plaintiff at the trial, testified (R. 144):

“Q. When you spoke about these slats having grooves in the new Braun towers in 1920, where were those grooves?

“A. The grooves were on top of the slats.

“Q. Forming little troughs along the top of the slats? A. Yes.

“Q. There were no grooves, as far as you know, anywhere else on the slats?

“A. No, not as far as I know.”

---

#### NON-INFRINGEMENT.

Our Circuit Court of Appeals in *Barley v. Witt*, 261 Fed. 77, by Judge Hunt said (p. 85):

“Notwithstanding the fact that there are the same mechanical elements present in the device of the patent in suit as in the construction of appellants, the manner of operation described in the patent claims determines whether there has been infringement; and, as we understand it, appellants do not use the manner of operation described by the patent claims.”



MANY DIFFERENCES INCORPORATED IN THE ADDITION  
FROM THE ORIGINAL TOWERS.

As showing the difference in the addition made by Braun to the original Shell Oil Company towers Braun testifies (R. 168-169):

“Q. What enlargement did you make? How did you enlarge it?

“A. We built an addition to the tower.

“Q. You mean you lengthened it?

“A. We lengthened it.

\* \* \* \* \*

“Q. Was the construction of this addition the same as the construction which you have already described? A. No.”

“A. *It differed* in the design of the main deck boards.

\* \* \* \* \*

“A. The longitudinal deck boards, the cooling decks. *It differed* in the manner in which these decks were spaced and secured to the supporting members. *It differed* in the design of the redistributing deck; *it differed* in the design of the transverse launders at the top of the tower; *it differed* in the design of the overflow distributing troughs at the top of the tower, the primary overflow distributing troughs, and it differed in some structural details.”

Braun frankly admits that this addition was made without asking the Cooling Tower Company for any license (R. 169); it being entirely outside of the patent. There was no reason why a license should have been requested.

Elsewhere Braun points out the difficulties they had with the Shell Oil Company towers, resulting

eventually in the old metal towers being torn down and scrapped and new towers entirely of wood built according to the Braun patent in suit were erected in 1920 (Braun R. 171).

Braun says (R. 218):

“I found that the Mitchell-Tappen Co. had very inadequate or practically no facilities for manufacturing cooling towers, and I found that the structural design was very poor; I found that the distinctive features of their tower were on very limited details; and I found that a number of their details were highly impracticable.

\* \* \* \* \*

“The most important of these details, as far as impracticability was concerned, was a spline. In a tower of this character, there is a large quantity of deck lumber to be installed. These boards are usually 18 feet long; they are frequently warped out of shape when they are received on the site of erection, and to endeavor to place little splines between these at short intervals between two of these long boards and to keep them there until you can secure the board in place is almost an impossible task, and at best an extremely costly process.”

---

**THE 1916 ADDITION TO THE SHELL OIL COMPANY TOWER  
DID NOT EMBODY ANY OF THE COFFEY PATENTED  
FEATURES.**

Thus the testimony of Braun (R. 202-203):

“Mr. TOWNSEND. Q. In regard to this addition of 1916, what features, if any, employed in the original 1915 tower did you use?

\* \* \* \* \*

“A. We made the tower conform architecturally to the other tower, but we did not use the spline deck construction.”

---

FURTHER OBJECTIONS TO THE SPLINES.

Continuing Braun says (R. 218-219):

“*The deck boards are fastened by nails or lag screws at the support.* The purpose of the spline is to space the deck boards, to space and maintain the space of the deck boards between the supports, at any point where spacing may be required. These are loose splines, and are supported by the grooves in the deck boards at any point without the need of a deck supporting member.”

Plaintiff in its appeal brief says (page 3):

“It appears that the old deck was composed of slats nailed to a frame work at intervals and spaced apart so that the water might run down or fall between the slats.”

Mr. Braun tells us that this “old deck” was the plaintiff’s own patented deck of the 1915 Shell towers using splines and with the slats nailed down. (Testimony quoted supra and post.)

We pause at this point to call attention to the misstatement of fact so often repeated in plaintiff’s and cross-appellee’s brief, that if not promptly answered may lead to some confusion in the mind of the Court as to the Coffey structure.

NO LONGITUDINAL EXPANSION OF SLATS PERMITTED IN  
PLAINTIFF'S SHELL TOWER OR COFFEY PATENT.

Despite this evident fact, we have the repetition of error accentuated in the plaintiff's brief on appeal at pages 4, 10 and 24. Bearing in mind that Braun emphasizes the fact that the plaintiff's "deck boards are fastened by nails or lag screws at their supports" and the Coffey patent shows end supports 4 and each and every of the slats are clearly shown in the model of the Coffey deck (Exhibit H), counsel for plaintiff in his appeal brief says (page 4):

\* \* \* "the bars or slats are secured to the frame of the deck and spaced apart by spacers which permit longitudinal movement \* \* \* of the individual bars or slats while maintaining the spacing between adjacent bars."

The spacers with the splines *do not* affect any securing whatever of the slats to the frame. They *do not* permit any "longitudinal movement" of the bars, but, on the other hand, being loose in the grooves of the slats, the *splines* may be moved longitudinally when impelled by some outside agency, as the workmen in assembling the tower.

Mr. Braun has said above regarding Coffey and the Mitchell-Tappen Company's Shell tower:

"The deck boards are fastened by nails or lag screws at the support. The purpose of the spline is to space the deck boards, to space and maintain the space of the deck boards between the supports, at any point where spacing may be required."



Earlier Mr. Braun said in describing the Coffey construction Mr. Braun says (R. 199-200):

“These are *deck boards* grooved, or the deck member, on each side, and *secured at each end*; and intermediate between the ends are loose splines which space these boards—spline 7 spaces the boards. The object of these splines appears to be to space the boards intermediate the place where they are fastened. *These boards are fastened securely at each end to a solid member*, and no *provision is made for the independent expansion of any one of these boards*. These splines serve solely as spacers, as this board cannot expand more than this board without moving this board.” (Italics ours.)

Later he says, as we will see (R. 219) concerning the Coffey slats:

“These boards are fastened to the transverse members, and secured by nails or lag screws, or similar devices. \* \* \*

“They are not secured to these transverse members by the splines;”

And at R. 220-221 Braun says:

“They were driven through the deck boards.”

At R. 237 Braun says:

\* \* \* “the splines do not secure the deck to any deck member.”

The Coffey patent says (R. 82—Book of Exhibits lines 41-52):

“The decks are formed of drip bars 6 which may be of any desired shape and are loosely splined together with splines 7, said



splines being shorter than the length of the bar; on each end of these bars splines 8, longer than splines 7, connect the bars together. *The bars are each individually held to the horizontal framework 9 by screws or dowels 10, and are not rigidly secured together. The outer members are splined together with continuous splines 11.*" (Italics ours.)

Nevertheless we find plaintiff urging its erroneous view upon this Court again at the bottom of page 10. Thus:

\* \* \* "Coffey was the first to discover and devise a means of attaching the slats or drip bars of a cooling tower deck in such a manner \* \* \* allowing individual *longitudinal expansion.*" (Italics ours.)

Again, at pages 23 and 24:

"A reading of the Coffey specifications and drawings discloses that Coffey desired and intended to produce a deck in which the several slats were to be permitted *individual longitudinal expansion* and his patent drawings show straps at the two short ends only."

There is not one word in the patent about "longitudinal expansion" and the frame 9, by which the slats are all enclosed and to which they are spiked, utterly disprove the contentions of counsel for plaintiff, particularly in the light of practice showing that the plaintiff's slats were nailed down at the deck supports.

The deck of the Coffey patent might as a whole expand or contract but that would be without any relation whatever to the floating splines. On top

of that, if we consider that the individual slats are always nailed down, longitudinal expansion is out of the question. It is possible that plaintiff's counsel had in mind and merely meant to say that the splines could be moved longitudinally of the slats and individually to any point in the length of the slats between the deck supports, over the deck supports, or anywhere. Such a function, of course, is not possible in defendant's slat securing and spacing means.

It is wholly erroneous for plaintiff to contend that the splines have any securing or holding down function.

It is worthy to note that plaintiff's own witnesses, Coffey and Phillips, utterly failed to support the contentions here made on appeal as the functions and operations of the splines.

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**FURTHER TROUBLE WITH THE SHELL JOB, BEING A TROUBLE INHERENT IN METAL TOWER CONSTRUCTION.**

Braun says (R. 223-224):

“We had a great deal of trouble with the structural steel work; the structural steel work was composed of very light members; they had been shipped and rehandled a great many times, and had been seriously damaged, and, I believe, that they came from some structural company up in New York, and were shipped to New York by rail, or possibly river steamer, transferred to a steamer for San

Francisco, and then transferred by steamer up to Martinez; the structural steel was in very bad condition when we received it. Many of the castings were broken, too.

\* \* \* \* \*

“In the Shell tower the lumber was delivered in random lengths, it was not cut to length, and was laid on top of the 45 degree members for supporting these louvers, in a manner similar to the way a floor is laid—they were not put up in panels. The boards were joined at random points, and were nailed together. The louvers were held down against the 45° members by a loose-fitting bolt passing through a slotted hole; that is, the angular member for supporting the louver had slotted holes in it, and bolts were screwed through the louver to hold that down so it would not blow up.”

---

#### NON-INFRINGEMENT OF COFFEY BY BRAUN.

##### THE SPLINES OF PLAINTIFF SERVE NO FUNCTION OF HOLDING DOWN THE DECK.

The “splines” of plaintiff *do not perform any securing* or holding down function, but may be drifted or moved in the grooves, as spacers for the slats, to any point *between* the deck supports. Braun’s brass strips, on the other hand, *secure* the drip bars, and are *only at the supports* where they can be nailed.

“These boards are fastened to the transverse members, and secured by nails or lag screws, or similar devices.

“A. They are not secured to these trans-

verse members by the splines; *they are spaced and held in position at these supports* by the fastenings, *regardless of the splines*. In between these deck supports, which are several feet apart, Mr. Coffey apparently thought it would be necessary to provide some spacing members in between the supports."

In the Shell construction the *drip bars* were *nailed down*; the splines were placed at random merely as spacers.

Braun says (R. 220-221):

"Mr. TOWNSEND. Q. In the plaintiff's construction, put up at the Shell Company, were the nails driven directly through the deck boards?

"A. *They were driven through the deck boards.*

"Q. Did you have any complaint from the erecting force up there at the time the Shell towers were going up, in regard to the splines you have spoken of?

\* \* \* \* \*

"We had complaints that *the installation of these small splines was a very difficult and impractical task*, and for the reason that I have explained previously in my testimony today, bearing in mind that these spaces are several feet, and the boards are possibly 12 or 18 feet long, these splines swell also, and it was very difficult to get them in and very difficult to keep them; in order that they will not fall out, they have to be made of fairly tight fit, and the result is the splines have to stand more than the board does; it is almost impossible to get them in the slots." (Italics ours.)



DIFFERENCE BETWEEN THE PATENTED SPLINES OF  
COFFEY AND THE BRASS SECURING STRIPS OF DE-  
FENDANT.

Braun says (R. 221):

*“The brass strips used by us and shown in my first patent are used only at the transverse deck-supporting members, and are securely fastened to them. Their purpose is to secure the deck boards to the transverse deck-supporting members, and to allow of longitudinal expansion of the deck boards.”*

Defendant does not use a “spline” nor any equivalent.

Mr. Braun (R. 222) says:

“These strips could be considered as a series of staples; for instance, the same result would be obtained approximately, if a staple were driven over the boards into the transverse supporting members.

“The COURT. Do they have any effect whatever upon the lateral swell of the deck boards between the supporting members?”

“A. They have no effect whatever. They are not used between the supporting members.

“Q. You have no device, then, in your installation, corresponding to that wooden spline?”

“A. We have nothing whatever. We have on the deck securing members at the deck supports. The advantage of this strip, one of the advantages of a continuous strip of this fastening over a staple would be that where a staple such as that one, for some reason, became loosened, that particular deck board might be loosened by the wind and be blown out, but with a continuous strip, if one or more of these nails fastening the strip down became



*loosened or pulled out, the other nail in the strip will still hold that strip down, as a more or less effective member, and will prevent that board being blown away.*" (Italics ours.)

---

FURTHER DIFFERENCES BETWEEN THE "SPLINE" AND  
DEFENDANT'S CONSTRUCTIONS.

The differences are further emphasized by Mr. Braun on cross-examination. Thus Mr. Braun testifies (R. 237):

*"The distinction between our member and splines is that ours is deck-securing members securing the deck to the transverse deck-supporting member; and the splines do not secure the deck to any deck member. That is the difference between the splines and the member that we have used."*

At R. 239 Braun testifies:

"Mr. TOWNSEND. The file-wrapper has so definitely fixed that fact, that it is the best evidence of the meaning of the word 'spline' as used in the patent. They attempt to get claims which would cover any sort of spacing member, a wooden block put in there, and they were refused claims, and they were finally compelled to take the limited claims that they have got in their patent on loose spline work.

"The COURT. At any rate the evidence shows now that defendant is not using any spacing member whatsoever between the supporting members."

---

THE TRIAL COURT RECOGNIZED THE LIMITED NOVELTY  
OF THE COFFEY PATENT.

As indicating the feature of novelty of plaintiff's

patent the Court says in its memorandum opinion (R. 385):

“The patent of the plaintiff in suit has novelty only in one respect. These cooling towers consist of various decks known as ‘drip decks’ where the water is distributed at the top of the tower and flows down from one deck to another and passes between certain spaces between what is known as ‘drip bars’ or ‘steps’.

“The patent of the plaintiff consists of what is known as a ‘spline’, which is a spacing device placed between the various parts of the drip deck to keep them apart and at the same time, to take up the necessary expansion or warping due to the presence of the liquid and the passage of the air over the parts.”

In short, the addition made by Braun in 1916 was simply to the original tower only in such features as were necessary to make it conform to the general type of construction and architectural appearance of the original tower. This addition was not, and the Court so held, in any sense an infringement of the patent in suit or of any patent of plaintiff ever brought to the attention of the defendant.

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DEFENDANTS' PATENTS RAISE A PRESUMPTION NOT ONLY OF PATENTABLE AND, THEREFORE, SUBSTANTIAL MECHANICAL DIFFERENCE, BUT OF NON-INFRINGEMENT.

*Western Well Works v. Layne & Bowler Corporation*, 276 Fed. 465, 472:

“In *Ransome v. Hyatt*, 69 Fed. 148, 16 C.

C. A. 185, this Court held that the issuance of a letter patent was prima facie a presumption of a patentable difference between it and an earlier patent, following the decisions of the Supreme Court in *Miller v. Eagle Mfg. Co.*, 151 U. S. 186, 208, 14 Sup. Ct. 310, 38 L. Ed. 121; *Boyd v. Janesville Hay Tool Co.*, 158 U. S. 260, 261, 15 Sup. Ct. 837, 39 L. Ed. 973. It is also a rule of law that infringement being denied, the burden of proof is upon the plaintiff to establish the charge. *Fuller v. Yentzger*, 94 U. S. 299, 305, 24 L. Ed. 107; *Bates v. Coe*, 98 U. S. 31, 49, 25 L. Ed. 68. We start, then, with a presumption in favor of the defendants' apparatus under the Halstead patent, and against the alleged infringement, and the burden of proof upon the plaintiff to establish infringement."

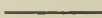
*Kokomo Fence Co. v. Kitselman*, 189 U. S. S. 47 Law Ed. 689;

*Union Match Co. v. Diamond Match Co.*, 162 Fed. 148, 155 (C. C. A.);

*Corning v. Burden*, 15 How. 252, 14 L. Ed. 683;

*Boyd v. Janesville Hay Tool Co.*, 158 U. S. 261, 39 L. Ed. 973;

*Taber v. Marceau*, 87 Fed. 871 (Judge Morrow).



THE TRIAL COURT HELD NON-INFRINGEMENT BY BRAUN  
OF THE COFFEY PATENT.

The Court says in its opinion (R. 385-386):

"The defendant, in place of using this movable spline or piece of wood to separate these

parts of the deck, has adopted a metal strip, consisting preferably of brass or copper, which is fastened across these drip bars or integral parts of the drip deck so that they can expand not only latitudinally but longitudinally.

In my opinion there is, in the first place, grave doubt as to whether or not the spline of the plaintiff constitutes any novelty. But if it is so, it is clear that the fixed strip used by the defendant does not constitute any infringement. The injunction prayed for by the plaintiff will therefore be denied."

We submit the Court's finding in that matter was entirely correct.

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#### DEFENDANT'S COUNTER-CLAIM ON BRAUN PATENT.

The 2nd counterclaim which we shall consider first in order, is based upon the second Braun patent No. 1,442,784, dated January 16th, 1923. Infringement is charged of the Braun patent by the manufacture of a cooling tower embracing the combinations of claims 1, 2, 5, 6, 7 and 10 of the Braun patent by the plaintiff or by those acting under plaintiff's direction for the Pasadena Ice Company, illustrated in photographs in evidence. The erection of this tower occurred before and during the period of and after the time interval between the issuance of the patent on January 16th, 1923, and the filing of the counterclaim on February 20th, 1923.

The main defense as we take it is that the Braun patent for some reason or another is not valid. We



do not believe there is any serious contention that if the patent is valid the plaintiff has infringed. Therefore, the main issue seems to revolve around the validity of the combinations of Braun, represented by the claims sued on, to-wit: 1, 2, 5, 6, 7 and 10. See (R. 49-50) Book of Exhibits.

These claims are as follows:

“1.—A water-cooling tower comprising a main frame formed by vertical posts carrying horizontally extending frame members, said frame members projecting beyond the ends of the posts, decks adapted to be supported by the portions of the frame members occurring between the posts and inclined louvers supported by the outwardly projecting ends of said frame members.

“2.—A composite water-cooling tower comprising a main frame formed by vertical posts disposed in spaced relation to each other, horizontal frame members carried by the posts and forming superposed rectangular supporting frames, said frame members intersecting each other at the posts and extending therebeyond, deck units adapted to be disposed upon the portions of the frame between the posts, and inclined louver units secured to the outwardly projecting ends of the frame members.

“5.—In a cooling tower corner posts, sets of horizontal frame members adapted to intersect each other at the corners of the tower and to project therefrom, said sets of frame members being arranged throughout the height of the tower and assembled louvre sections secured between the outwardly projecting frame members at the sides and corners thereof and in diagonal inclined positions.



“6.—A cooling tower comprising an upright frame structure, a plurality of superimposed cooling decks carried thereby and outwardly and upwardly flaring louvres secured around the frame in a protective position relative to said cooling decks, said louvres comprising assembled sections adapted to be secured to the frame to form a continuous louvre structure.

“7.—A cooling tower comprising vertical frame posts, horizontal frame members supported from the posts and adapted to extend beyond the sides thereof to form a rectangular frame with overhanging ends and louvre sections supported in inclined positions between the various overhanging ends of the horizontal frame members.

“10.—A cooling tower structure comprising a plurality of sections, each formed of vertical supporting members, horizontally extending beams in superposed relation to each other and carried by the vertical members, said beams extending beyond the outermost vertical members, horizontal cooling decks carried on the beams and between the vertical members, and inclined louver panels secured by their upper and outer ends to the projecting ends of the horizontal beams and by their lower and inner ends to the horizontal beams near the vertical members.”

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#### DEFENDANT'S PATENTED ALL-WOOD TOWER.

In all towers prior to the advent of the Braun construction, whether the towers were made of wood or steel, the tower frame depended for structural bracing in every instance known on a complex system of criss-cross bracing within the tower,

often supplemented by outside props to the ground clothes line fashion.

One of the great objections to the criss-cross bracing within the tower was and is, as already pointed out by Braun and Shattuck, the valuable space taken up which might otherwise be devoted to the more efficient handling of the water within the tower; this being in addition to the greatly added weight put up on the structure itself. Since these towers often go into congested commercial districts every available foot of land must be utilized and the heights of the towers secured in volume of water handled, economy of space and enduring strength of the tower structure itself.

Prior to Braun, in order to get this desired strength, it had been common, and especially so with the plaintiff's cooling tower to build their towers of steel, employing steel shapes in the vertical and cross members with an intricate system of internal cross bracing simply using wood slats for the decks.

The louvers in the plaintiff's structure immediately prior to the infringement complained of by plaintiff were largely metal, hung directly on the outside of the tower proper, much after the fashion of a fire-escape. Everyone knows a fire-escape adds nothing to the structural stability of a building. It is a necessary excrescence, and so it was in all the towers prior to the Braun structure, as we will point out when we come to consider the

Braun patent. His invention, whether in wood or metal, embodied for the first time the utilization of the relationship existing between the tower structure and the previously excrecent louver appendages in such a way that the louver was made to become an integral component of the tower itself and directly contribute, by an external simple connection with the deck supports, to utilize the principle of a truss, not only building a cheaper and more efficient tower but one of longer life and capable of resisting higher windage and greater loads than had ever been known before. This principle of the Braun patent is epitomized in the foregoing claims of the Braun patent No. 1,442,784 charged to infringe (R. 250 and R. 384).

(While frequent reference herein is made to the fact that defendant's tower is an "all-wood" tower, it is to be understood, of course, that the invention of defendant, as illustrated by the Braun patent relied on in the counter-claim, does not lie in the fact that the Braun tower is an all-wood tower as distinguished from the steel tower of the plaintiff and the prior art.)

---

**DEFENDANT'S PATENTED TOWER SHOWN BY  
MODEL EXHIBIT "D."**

The defendant's cooling tower, which, for brevity, will be referred to as the "Braun Cooling Tower" is illustrated by the model in evidence (Defendant's Exhibit "D"—R. 183).

Mr. Braun in a description of his tower says (R. 184-5):

“The cooling of the water in the cooling tower is accomplished by bringing about intimate contact between the water and air. In this type of tower the water is distributed by some means at the top and flows successively from deck to deck to the basin underneath, the wind carrying the air across the tower, causing contact between the air and the water, the water emerging at the bottom cooled.”

---

**DISTRIBUTING SYSTEM.**

(R. 186-187):

“Water is delivered by a pipe or other conduit into this flume at the top of the tower; at intervals along the tower are other flumes, D, smaller flumes, into which the water from the main flume is distributed, this flume carrying the water across the tower, and from this flume the water is distributed into, in this particular case, four overflow troughs, from which the water overflows and drops onto troughs that run transversely of the tower from which the water again overflows and drops onto this longitudinal cooling deck, which really extends from end to end of the tower.

\* \* \* \* \*

“As the water drops from deck to deck and runs over the deck boards and down between them and around and off of them, the wind is blowing, generally from one direction, and the tower is usually set across the direction of the prevailing wind, so that the wind will blow across the tower; if the wind is blowing rather



briskly across the tower, the water, as it drops from deck to deck, will be briskly blown toward the lee side of the tower, so that finally, near the bottom, the water will be going down, largely down the lee side of the deck, while the windward side of the deck is dry. To overcome that difficulty, we install a redistributing deck, which consists of troughs, G; these extend transversely of the tower, dammed at each end; these troughs serve to carry the excess water across, some of the excess water going down the lee side of the tower back to the windward side of the tower, and to start the water again in the condition of fairly uniform distribution over the tower."

---

**RE-DISTRIBUTION OF THE WATER.**

(R. 187):

"The water then drops from deck to deck, down through the remaining cooling decks, and finally into the receiving basin or bond at the bottom of the tower. This redistributing deck is constructed in a manner similar to that in which the 1920 tower at the Shell Company was constructed, but not to the detail shown in my patent which was just under discussion."

---

**BRASS RIBBONS FOR SECURING THE SLATS.**

(R. 187-188-189):

"The deck F has a brass ribbon, a continuous brass ribbon, usually supplied in one piece the entire width of the tower, pressed down at intervals to provide spacing for the decks, and



to permit of fastening to the transverse members; a nail, lag, screw, or some similar device is driven through this brass strip in each of these spaces. There is a large-sized model of it.

“MR. TOWNSEND. The witness refers to a little model which I will ask to be marked Defendant’s Exhibit ‘E’.

\* \* \* \* \*

“Returning to the distributing deck, you will note that this is a continuous board—you will note that the member I mark I is a continuous board extending across a large number of the troughs, and permanently secured to each trough by a nail; that *there are no loose members here*. You will also note that this metal strip H is a *continuous strip* usually extending across the entire width of the tower, and securely fastened by means of nails to the transverse deck-supporting member.” (Italics ours.)

---

#### PURPOSE OF THE LOUVER.

(R. 185):

“The center part of the tower, as bounded by the columns, roughly, has to do with exposing this water to the air; the wind, in blowing it sometimes has a considerable tendency to carry particles of water away, and these louvers on the sides of the tower are inserted to intercept the particles of water that are being blown by the wind away from the tower and to return them to the tower.

“As the direction from which the wind may blow cannot be controlled, these louvers are installed around the entire periphery or the exterior of the tower. In this model the louvers on one side, and on one end, have been omitted,

so that the interior is accessible for view and discussion.”

---

#### THE BRAUN INVENTION.

Bearing in mind the problems of a cooling tower manufacturer as already pointed out, Mr. Braun has this to say concerning the features of the Braun invention of the counter-claim patent (R. 191-192):

“The louvers are made in panels which are fabricated in the factory, drilled, and shipped out as fabricated members in this shape which are hoisted up and bolted. These *panels* also serve as *structural members tying the entire structure together, and form a truss with the other members.*”

“*In Braun these longitudinal members also extend beyond the end of the towers to receive the louvers in a manner similar to the way the transverse deck-supporting members extend to the louvers.*” (Italics ours.)

---

#### BRAUN FACTORY FABRICATED KNOCK-DOWN TOWER.

Braun says (R. 195):

“We now fabricate these at Alhambra. Alhambra is a small town lying right between Los Angeles and Pasadena. We have a large shop there in which we fabricate even these parts; they are all drilled and these panels are fabricated, all ready to be assembled. One of the features of our tower is the fact that our field labor is reduced to a minimum; field labor is labor which cannot be controlled; it is liable

to be very expensive, and also liable to result in very poor workmanship, so all of this work is done in the shop."

---

BRAUN'S TOWER IS THE FIRST TOWER WHEREIN THE LOUVER CONSTRUCTION SERVED ANY STRUCTURAL FUNCTION.

Thus Braun says (R. 195-196):

"In the towers that I have been familiar with, the louver construction does not serve any structural function.

\* \* \* \* \*

"You must use a large number of internal braces of some kind or guy the tower by means of external guy rods in a manner similar to what you would guy a smokestack. The essential difference between this tower and the tower first built at Martinez is that with this tower the deck supports and louver supports are one, and the *louvers are tied firmly into these deck supports*, so that the whole forms a very rigid structure, thoroughly tied together, and all members acting in harmony. In the other tower the deck supports—

"In the first tower built at Martinez, the deck supports are not related in any way, structurally, to the louvers; they are bolted, as shown on the drawing, by one bolt, so that they apparently serve no structural function other than to just hold the decks up, support the deck portion." (Italics ours.)

On cross-examination Braun says (R. 380):

"I will state specifically that the development of the *extended beam and making use of*

*the louvers for structural support* was the direct outcome of our endeavoring to *reduce the number of internal bracing members*, which seriously obstruct the entry of the wind to the tower. It was specifically for that purpose." (Italics ours.)

---

DEVELOPMENT OF THE BRAUN INVENTION.

Mr. Braun says (R. 364):

"We observed that *most all atmospheric cooling towers which came within our experience seemed weak structurally*; we noticed this on the Shell towers at Martinez, which were, as a matter of fact, *later condemned*, and some of the parties deteriorated had to be torn down for fear they would fall down, and we built a number of towers in accordance with the drawings shown on the *first Braun patent*; *these towers lacked the desired stability*. In an endeavor to overcome this, we undertook the design of the existing Braun type of tower, and *extension of the deck-supporting members so as to support the louvers and form a continuous beam*, and a *triangular truss* between this horizontal beam and the vertical beam was a result of this effort to *increase the stability* of the atmospheric type of cooling tower." (Italics ours.)

"Q. When did that work begin, the design of that?

"A. That work began rather late in 1918 or early in 1919."

Braun says (R. 364-365):

"This work was started by me, assisted by Mr. Houghton, and was later taken up by Mr.



Shattuck, who had been in the service, on his return from the service. \* \* \* Mr. Shattuck carried out the details of the design; the principles were developed prior to the time that he took the work up. \* \* \* We built in 1919 the first towers of the new type. \* \* \* The first tower was built very shortly after Mr. Shattuck's return, I don't exactly remember when he returned.

\* \* \* \* \*

"I think that we began work on the fabrication of a tower of this type within about a month after he returned."

Mr. Shattuck says (R. 266):

"That construction went through a *process of development some years ago*, and I took it up on being discharged from the army, and went in on drafting work under Mr. Braun's instructions to design an improved water tower.

\* \* \* \* \*

"Q. Had any work been done on the design of the particular form here when you returned from the army?"

"A. As I remember, yes, he had done quite a little sketch work, and preliminary consultation work."

Witness Shattuck was discharged from the Army March, 1919 (R. 267). He says:

"Q. When was it you came out of the army?"

"A. I was discharged in March, 1919; the armistice was 1918.

\* \* \* \* \*

"A. I started in picking up the threads of the design work, and I followed out the details.

\* \* \* \* \*



“As I recollect on taking up the work, we were working on a complete wooden tower, endeavoring to make all members of that tower take care of certain stresses and strains, and not be a dead load or not functioning in that respect. It was important to *do this owing to the fact that we should get a tower made of wood that would not contain large structural members which would hinder the passage or stop the flow of wind through the tower or windage through the tower*; we bore these facts in mind, also economical facts as to cutting down lumber to the minimum, and facilitating field erection, and also the length of lumber, using lengths that were most economical to purchase.” (Italics ours.)

---

INTER-RELATION OF LOUVERS AND TOWER ELEMENTS  
CONTRIBUTE TO THE RESULTS FIRST ACCOMPLISHED  
IN THE BRAUN TOWER.

Mr. Shattuck testifies (R. 268):

“Q. Can you mention the members or elements or indicate them, which contribute in your opinion to that desired result?

“A. The *transverse members and longitudinal members supporting the deck that extended beyond the columns to hold the end of the louver*—by employing that transverse member extended beyond the column we were able to get a very rigid structure, and it enabled us to use the *louvers to form a truss that braced the whole structure; heretofore the louvers has been merely to prevent water from leaving the towers, but had performed no function in bracing the tower in its entirety.*” (Italics ours.)

Braun says (R. 226):

“Our tower has *greater structural strength and rigidity*, which is a very important feature in the cooling tower, which, for proper performance, *must be exposed freely to the prevailing wind*. Our tower also has a great advantage of being constructed in units. It is a manufactured tower, fabricated at a factory, shipped in units, such, for instance, as the louver panels, which are assembled and bolted together at the site of erection, at a minimum cost for field labor. The saving in field labor not only effects an economy, but it results in a better structure. A structure, the majority of the parts of which are built in a factory, which can be properly controlled, will be far better mechanically than a structure, a large portion of the work of which is done in the field, which may be at remote places, such as oil fields, and mines, or other locations where skilled labor is difficult to secure.” (Italics ours.)

---

LOUVERS HAVE ALWAYS BEEN APPENDED TO OR HUNG ONTO A TOWER TO HOLD IT DOWN RATHER THAN REINFORCE IT.

Thus Braun says (R. 374-375-376):

“Q. In your experience, and from any of the patents or drawings in evidence, has there been any showing anywhere at any time to your knowledge where the extension of whatever sort it has been apparently designed for the purpose and intention of co-operating with the deck member, as stress or load supporting or resisting member?

“A. No. I have never seen any such struc-

ture. Apparently, *louvers have always been considered as an appendage to hang onto the tower, and hold them down.* The use of this material for structural purposes had never been recognized.” (Italics ours.)

Continuing Braun says:

“I would like to make one more thing clear, and that is, in a cooling tower there is an additional reason for resisting the number and size of the structural members in the tower, and that is that *all structural members offer resistance to wind, and if too many structural members were used in the tower, an insufficient amount of wind would enter the tower and the water might, therefore, be not properly cooled.* This, to my mind, is a very important feature in cooling tower design, to so design the tower that there is a comparatively free passage for wind.

\* \* \* \* \*

“We had a rather remarkable proof of the efficiency of this type of bracing in a tower which we installed for the Shell Company, the third tower which we installed for the Shell Company, on a high hill overlooking Carquinez Straits; this tower had in it some metal tie rods similar to the tie rods in Model D, and the tower was subjected to a very severe gale, and the fastenings of all these tie rods broke, apparently the fastenings were weaker than the tie rods, but *the stability of the structure was unchanged.* I presume that the breaking of the tie rod fastenings, was due to the slight flexibility in the wooden structure, but the structure was not distorted in any way, and we later replaced these fastenings.” (Italics ours.)

## BRAUN AND COFFEY AGAIN DISTINGUISHED.

While Braun has found wood to be the most satisfactory, the Braun invention resides in the particulars previously referred to, to-wit:

*That is of so constructing and arranging the structural elements of the tower that the deck supporting beams of the tower are not only extended horizontally beyond the vertical posts but they are so connected to the louvers at the top of the latter and the louvers in turn are so anchored to the tower at their inner bottom ends that the resulting structure is a trussed structure and the deck members become what are termed, restrained beams, with the result that not only is a cheaper structure produced by Braun and a more durable one, due to the added rigidity, but the extensions of the deck members, with their louver connections, provide a style of external bracing so that the interior of the tower is practically free for cooling and water distribution purposes without interfering with the efficiency of the tower.*

---

 ADVANTAGES OF AN ALL-WOOD TOWER.

Braun says (R. 225):

“There are many advantages of an all-wood tower. One of the great advantages is durability of the tower. Towers which have steel in them will under many conditions corrode very rapidly. Cooling towers are subjected to very corro-



sive influences: the water passing over them is warm; frequently, it is highly impregnated with salt, due to concentration in the steam, and they are freely exposed to air, providing the oxidizing agent for oxidizing the steel parts. For that reason, a tower made of wood, particularly redwood, which has rot-resisting qualities, and with fastenings of some highly corrosive resistant substance, such as brass or copper, is far superior to a tower having steel members."

While wooden towers were, of course, not invented by Braun, they were of the home-made type and generally were what is known as "bird-cage towers" in which the louvers were hung upon the tower frame much after the fashion of a fire escape on a building.

Braun says (R. 225-226):

"Wood towers have been in general use for a great many years; many of them were home-made affairs, built by the customers, and sometimes were called bird-cage towers; some of them were made with lath; most of them were rather flimsy, and they were made almost entirely on the top floor as a house is built, not fabricated, and for that reason were usually costly."

---

DEVELOPMENT OF THE WOODEN TOWER BY THE  
DEFENDANT.

Mr. Braun testifies (R. 182):

"XQ. I have understood you in saying a wooden tower to mean a tower constructed substantially of wood. Up to the time that we



built this type of tower, the large louver type of tower, built substantially of wood, I had not seen any towers built by any concerns of this type, built substantially of wood. \* \* \* The plaintiff's tower was not built substantially of wood. It was substantially a steel structure."

---

## THE PROBLEMS INVOLVED IN TOWER CONSTRUCTION.

### WIND STRESSES AND DECK LOADS.

Braun was the first one to build a wooden tower, or any tower for that matter, which would satisfactorily take care of the various factors tending to the destruction of these great structures.

Braun says (R. 193 and following):

"There are two types of loads in a cooling tower; one is the weight of the structure and of the water in the structure, and the other is the wind load, the load that tends to blow it over. One of the objects of extending these transverse members is to use the louvers as structural members, stiffening the entire tower and making the structure rigid as a whole. These louvers are bolted in between these transverse members J-1 and stiffen the tower from wind loads transversely by reason of the truss which is formed, and also stiffening the tower longitudinally by reason of the truss formed in this direction; that is, any tendency for the tower to move this way would be resisted by this portion in here."

---

### VERTICAL DECK LOADS.

Mr. Braun has built towers up to 380 ft. in length, about 12 ft. in width and from 30 ft. to 35

ft. in height (R. 193-194). Mr. Braun says (R. 193-194):

“30 to 35 feet is about an accepted standard for cooling towers, and that height seems to have been used almost universally in fan towers, as well as atmospheric towers; it seems to be about the limit that people are willing to pump water. It costs money to pump water.”

As to the loads that these towers carry, Mr. Shattuck, Secretary and Engineer of the defendant company, says (R. 267-268):

“As I recollect, these towers carry loads up to—the water alone, 100,000 gallons, would be roughly 800,000 pounds per minute, and distributed over the tower from some flume which often times has considerable head. There were numerous loads. Of course, there was a windage load to take into account, and the dead weight of the tower itself, the timber and wood material.”

(To the same effect see Braun R. 196.)

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#### HORIZONTAL WIND PRESSURES.

Concerning wind velocities and wind pressures, Mr. Braun tells us at R. 194 and 214 that the wind resistance is usually expressed in pounds per square foot. Most structures are 30 pounds per square foot. One can appreciate the tremendous pressure that a comparatively long, tall and transversely narrow structure of this sort must stand in a broadside gale. Thus a structure 380 ft. long and 35 ft. high

must, on the basis of 30 pounds to the square foot, be able to withstand a side pressure or thrust of approximately 400,000 pounds; this side pressure of 400,000 pounds being in addition to the 800,000 pounds dead weight of water, to say nothing of the weight of the structure itself. The importance of this, of course, becomes manifest when we come to consider what Mr. Braun accomplished in his tower design shown in the patent here counter-claimed and that he was the first person to build a scientific, successful and satisfactory tower entirely of wood, eliminating all external ground bracings and internal criss-cross timbering.

Braun says (R. 371):

“The previous towers, with which I am familiar, including the Mitchell-Tappen cooling towers constructed at the Shell refinery at Martinez, and including the towers shown on the first Braun patent, have wooden deck-supporting members terminating at the column.”

---

**LOUVERS CONSTITUTE APPROXIMATELY 38 PER CENT  
OF THE MATERIAL IN THE TOWERS.**

Thus Braun says (R. 371, 372-373), particularly referring to the Shell Mitchell-Tappen tower:

“The supporting member for the louver really consisted of two angles, and each of those angles was riveted by a single rivet to vertical posts. In those structures the louvers added no structural strength to the tower, and did not in any way assist in the support of

either the vertical components of the wind load or the horizontal components of the wind load. In a structure such as shown by Exhibit D, having the members extending beyond the vertical columns and supporting the louvers, making use of the louvers as structural members, it is interesting to note that in the tower shown by Exhibit D approximately 38 per cent of the material in the tower is in the louvers.

\* \* \* \* \*

“The COURT. What proportion of that is in the panel?

“A. Looking at it, I would say possibly 35 per cent would be in the board, and perhaps 3 per cent in the members at the end of the board. That 38 per cent does not include the projection of the deck members, but only the louver panel. Really, the entire 38 per cent would be in the panel, and is differentiated say 35 per cent in the boards and possibly 3 or 4 per cent in the end members of the panel. So that here is a large amount of material in the tower which heretofore has not been used for structural strength, although *one of the big factors in cooler design is structural strength.*”

The foregoing testimony stands absolutely unfuted. The merit of the defendant's patented structure has found endorsement in the plaintiff's act of infringing imitation in abandoning its own steel construction and adopting the Braun construction in the Pasadena Ice Company plant.

Some desultory prior art has been referred to by the plaintiff in its effort to cast doubt on the validity of the Braun patent, but nothing better has been brought forward than that disclosed in the Braun File Wrapper.



IMMATERIAL EVEN IF BRAUN DID NOT FULLY APPRECIATE ALL THE MERITS OF HIS INVENTION AT THE TIME OF HIS APPLICATION.

In answer to plaintiff's contention suggested on page 34 of plaintiff's brief on appeal that the idea in Braun of attaining additional strength in a tower by the apparently simple expedient of continuing his deck supports beyond the uprights and so connecting them to the louvers and, in turn, connecting the louvers below to the uprights to form a strengthening truss and produce the remarkable results accomplished, was an afterthought, is, of course, wholly immaterial, even if that were the case.

Walker points out in Section 175 that the recital of function or the pointing out of advantages of a patent has no effect on its validity unless there has been some fraudulent concealment.

On this point see the Circuit Court of Appeals for the Third Circuit in *Mead-Morrison Mfg. Co. v. Exeter Machines Works*, 225 Fed. 489, 496, 497:

“We have not overlooked the fact that there was no mention in the patent of the lessening of vibration which now appears to be the most striking advantage of the patent. But we do not think the failure to disclose all the merits of a device should now serve to defeat it. Very often subsequent use shows that claimed advantages did not materialize, and in the same way use sometimes brings to light unsuspected merits in a device. In either case the presence or absence of asserted advantages is of evidential weight in securing the patent. The gist of a disclosure is that it be so full as will enable



those versed in the art to thereafter use the device, and where such use, practice, mechanism, formula, etc., are fully disclosed, the requirements of the law are satisfied, without claiming every advantage such device may have. If subsequent use discloses unsuspected additional benefits the patentee is the gainer during the life of the patent, and the public when it expires.”

The same Court in *Westmoreland Specialty Co. v. Hogan*, 167 Fed. 327, at page 328, said:

“The after-discovery of unsuspected usefulness in a disclosed apparatus, far from detracting from its value, may serve to enhance it. It is the benefits which test, use, and time unfold that really determine merit. It is this after-test, the test of use, that proves the worthlessness of the great majority of patents and establishes the value of the few.”

See also the Circuit Court of Appeals for the Sixth Circuit in *Morgan Engineering Co. v. Alliance Machine Co.*, 176 Fed. 100, where the Court at page 107 announces the general rule as follows:

“Even if the patentee at the time of making his application did not know of this advantage, or knowing failed distinctly to express it, he, in view of what he did state and show, is entitled to have his invention considered with reference to it. Indeed, the crane cannot be constructed and operated in accordance with the plain terms of his description without observing and securing this advantage. This alone is sufficient. *Goshen Sweeper Co. v. Bissell Carpet Sweeper Co.*, 72 Fed. 67, 73, 75, 19 C. C. A. 13; *Dowagiae Mfg. Co. v. Superior Drill Co.*, 115 Fed. 886, 895, 53 C. C. A. 36; *Stilwell-Bierce &*

Smith-Vaile Co. v. Eufaula Cotton Oil Co., 117 Fed. 410, 415, 54 C. C. A. 584.”

The foregoing, of course, all results from the general rule stated by Walker (Section 176):

“A claim covers and secures a process, a machine, a manufacture, a composition of matter, or a design, and *never the function or result of either.*” (Italics ours).

---

THE COOLING TOWER PROBLEM NOT ONE OF  
EASY SOLUTION.

That this is so is recognized by Mr. Coffey, the engineer and patentee of the plaintiff who said (R. 72):

“I first came in contact with atmospheric cooling I think in 1907 or 1908 through a connection I had with Edwin Burhorn who was then beginning the exploitation of the Ostendorff atmospheric cooling tower, which was, I believe, the first serious attempt to introduce this type of tower in the United States. *Ostendorff was one of the pioneer inventors of this type of apparatus.* I became very much interested in the atmospheric cooling problem from a scientific standpoint. *The condition of the science at that time being almost entirely rule of thumb.* In order to get data upon which some form of mathematical theory could be produced, *I made numerous tests of towers then in existence and closely observed all I had the opportunity of visiting in actual operation. I have continued my study of this subject which is a very baffling one and which is not yet on a sound theoretical basis to date.*” (Italics ours.)

FILE WRAPPER OF BRAUN PATENT No. 1,442,784,  
(Defendant's Exhibit "L"—R. 250).

The following patents, in evidence as Exhibits "O" and "T", inclusive, were cited by the Patent Office Examiner and finally considered as not anticipating the defendant's structure:

- Burhorn, 1,182,635, May 9th, 1916,  
 Burhorn, 1,234,444, July 24th, 1917, as  
 Burhorn, No. 973,163, October 18th, 1910,  
 B. F. Hart, Jr., No. 902,875, November 3rd,  
 1908,  
 B. F. Hart, Jr., No. 1,228,207, May 29th,  
 Schmidt, No. 693,625, February 18th, 1902.

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PRESUMPTION OF VALIDITY.

The Courts have uniformly held that the presumption of validity which attaches to every patent is strengthened by the consideration given in the Patent Office before the patent is granted, and authority for that is *United Shirt & Collar Company v. Beattie*, 138 Fed. 136, and *Brill v. New Jersey Street Railway Co.*, 124 Fed. 780.

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PRIOR ART.

ALLEGED DEFENSE OF PRIOR USE AGAINST THE BRAUN  
PATENT FAILS.

Plaintiff in its effort to defeat the Braun patent introduced a drawing dated May 15th, 1919, for a

tower which it claims was to have been erected in Michigan. The drawing is in evidence as Plaintiff's Exhibit 19a, drawing 441.

Aside from the fact that it does not show the Braun patented construction, the witness Coffey has no knowledge of any such tower being erected, and no other witness is called to show that such a tower was erected, or, if erected, how it was constructed or whether or not it corresponded to the drawings.

Thus Coffey says (R. 123):

“RD. Q. 136. Do you know, of your own knowledge, whether a tower in accordance with this drawing No. 441, Plaintiff's Exhibit 19, was actually constructed? A. *I do not.*”  
(Italics ours.)

As against this, the defendant showed a possession of the invention of the Braun patent in suit at least as early as the spring of 1919 and the making of drawings and other work before and following the discharge of defendant's engineer, Mr. Shattuck, from the army in April, 1919.

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#### HART TOWERS.

While Coffey and Phillips refer generally, and quite loosely, to towers constructed by one B. F. Hart, who appears also to have been a patentee in this field, having two patents issued to him as follows:

902,875—November 3, 1908,  
1,228,207—May 29th, 1917,

both of which were cited in the Braun File Wrapper. Neither the Hart patent nor the Hart towers, which the witness Phillips testified to, show, describe nor suggest the construction of the defendant's patent. The Hart tower is first of all a metal tower.

Concerning the first Hart patent (Q. 69, R. 105), Phillips says:

*“A. The lower support is not clearly shown in the patent drawing. This patent being taken out principally to show the method of leading off the water dripping from the tower. The method of support is the usual triangular support as used in construction work for centuries.”*  
(Italics ours.)

The deck construction of Hart was of metal and not wood. Thus Phillips (R. 106):

“XQ. 72. What was the construction of the deck members of the Hart tower that you saw at Elder & Wells in 1913?

“A. They were made of galvanized iron formed in accordance with Hart's standard design.”

Aside from the fact that the Hart device was a metal tower, the louvers were supported much after the fashion of a gutter under the eaves by straps or of fastening a fire escape on the side of a building; there being no interrelation or mutual support between the Hart louvers and the Hart frame.



## THE HART PATENTS AMBIGUOUS.

Phillips says (R., 106) :

“XQ. 73. Did the method of construction of supporting the louver construction of the Hart tower that you saw in 1913 correspond with the method shown in Hart patent 902875?

“A. *The patent does not clearly show the method of supporting the louvers.*

“XQ. 74. Do you mean that it doesn't show any method of supporting the louver or that you cannot understand the method shown in the patent?

“A. *The patent does not cover louver supports.*” (Italics ours.)

And again (R. 106-107) Phillips says:

“XQ. 78. And 11' also indicates, does it not, straps or braces extending from the bottom of the louver to the lower level of the tower?

“A. No. It indicates straps from both the lower and upper edges of the louver.

\* \* \* \* \*

“A. The straps shown in the figure are a part of the louver bracing.

\* \* \* \* \*

“The patent drawing is not clear as to whether it refers to a strap or a part of the louver and the louver itself, if stiff enough, can be used as the inclined member of the triangular support as a part of the iron of support.”

The second Hart patent (of 1917), in addition to its having been cited and considered by the Patent Office and held not to anticipate Braun, is considered at some length in the affidavit of defendant's expert

Mr. Chas. Moser, to whose testimony reference will later be made. This Hart patent, like the first one, is for a steel tower with an elaborate system of internal bracing and wherein the louvers give no more support nor stability to the tower than does a fire escape hung on the outside of a building. The strap hangers 22 of Hart merely serve to keep the top end of the louvers from falling away from the tower.

Of course, any testimony given by Phillips as to towers he may have seen in actual practice is based merely on recollection, unsupported by any record evidence, drawings or physical exhibits to indicate what the construction was he might have seen, much less when he saw it. Such sort of proof, of course, is not entitled to any weight on the question of anticipation of a duly and regularly issued patent.

Witness Coffey admits that his recollection as to the Hart construction, as well as when he first saw the Hart towers is hazy (R. 118):

“XQ. 119. What was the first cooling tower erected by B. Franklin Hart that you had personal knowledge of?”

“A. I could not answer that question. I have seen a great many of his towers and at this late date the exact dates when I saw the towers is not in my mind at all; I only know in a general way a few towers whose location I do remember and the time of observation of these towers is only fixed approximately in relation to other matters.”

As said by the Supreme Court in *Deering v. Winona Harvester Works*, 155 U. S. 286:

“Oral testimony, unsupported by patents or exhibits, tending to show prior use of a device regularly patented, is open to grave suspicion.”

Also see the *Barbed Wire Case*.

*Walker on Patents*, 2nd Edition, Section 76, page 70, says:

“The unsupported oral testimony of one witness is seldom strong enough to negative the novelty of the patent beyond a reasonable doubt; and the oral testimony of many witnesses, if unsupported by any evidence consisting of documents or things, must be very reasonable and very strong in order to negative novelty. This rule of reasonable doubt applies where the question of novelty depends upon the identity of the patented thing or process with the alleged anticipation, as well as where that question depends upon the existence or the priority of the latter.”

In *Emerson Electric Mfg. Co. v. Van Nort Bros. Electric Co.*, 116 Fed. 974, the Court says:

“The oral testimony of witnesses speaking from memory only in respect to past transactions and old structures claimed to anticipate a patented device, but which are not produced, is very unreliable, and it must be so clear and satisfactory as to convince the court beyond a reasonable doubt before it will be accepted as establishing anticipation.”

THE ESTABLISHMENT OF THE EXISTENCE OF THE ALLEGED PRIOR USE TO DEFEAT BRAUN BEYOND A REASONABLE DOUBT IS ON THE PLAINTIFF AND MUST BE SUSTAINED WITHOUT REFERENCE TO ANY PROOFS OFFERED BY THE DEFENDANT IN REBUTTAL.

*Cantrell v. Wallick*, 117 U. S. 695 (29:1019);  
*Coffin v. Ogden*, 85 U. S. 18 Wall. 120, 124  
 (21:821), 823;  
*Washburn v. Gould*, 3 Story 122, 142;  
*American Bell Telephone Co. v. People's Telephone Co.*, 22 Fed. 309;  
*Lehnbeuter v. Holtaus*, 105 U. S. 94 (26:939).

Want of invention of a combination cannot be predicated on the ground that the means are so simple that skilled mechanics believe they could have produced the same result (*Ross v. Montana Union Ry. Co.*, 45 Fed. 424; *Earle v. Sawyer*, Fed. Cases No. 4247).

It is a well settled rule of law that

“The unsuccessful experiments of others tend to show the exercise of inventive genius by the one who first produced a successful result.”  
 (*Ham Co. v. Dietz Co.*, 13 C. C. A. 690.)

As said in *General Electric Co. v. Wagner Electric Co.*, 130 Fed. 772:

“Where a prior device is set up as an anticipation of the complainant's patent and it appears that the defendant did not use or improve upon it, but adopted complainant's, the prior device is not an anticipation.”

COFFEY PATENT No. 1,158,107, OCTOBER 26th, 1915.

Plaintiff has left it largely to the Court to figure out what the structures are and what structures plaintiff is relying on to anticipate the Braun patent, since plaintiff called no witnesses, in addition to Coffey and Phillips in New York, except Mr. Braun and examined him as to the two towers which Mr. Braun's company purchased from the plaintiff in 1915 and erected as erection engineers for the Shell Oil Company at Martinez. A large mass of blue prints representing the working drawings of this so-called Shell Company job are in evidence. These drawings or copies of them had been supplied the Braun Company in accordance with the contract between the plaintiff and the defendant at the time the towers were erected, the drawings later being returned to the plaintiff or rather to the plaintiff's predecessor, the Mitchell-Tappen Company, when the job was completed and paid for.

Plaintiff's counsel contends in argument, although there is no evidence to the fact, that the Shell Oil Company's original 1915 towers embodied the structure of the Coffey Patent No. 1,158,107 of 1915 (not sued on) as well as the spline and groove system of the patent in suit. Whether or not that is a fact is wholly immaterial to the present issue. Mr. Braun has described the Shell Company towers as actually erected at Martinez, so that that description may embrace a description of this Coffey patent No.



1,158,107, which latter, we understand, has been introduced solely for the purpose of attempting to spell out an anticipation or limitation of the Braun patent.

As said by your Honors in *Stebler v. Riverside Heights Orange Growers' Assn.*, 205 Fed. 735-738:

“True, we may pick out one similarity in one of these devices, and one in another, and still one in another, and, by combining them all, anticipate the inventive idea expressed in the Strain patent, but the combination constituting the invention is not found in any one of them. As we had occasion to say in *Los Alamitos Sugar Co. v. Carroll*, 173 Fed. 280, 97 C. C. A. 446:

“‘It is not sufficient, to constitute an anticipation, that the devices relied upon might, by a process of modification, reorganization, or combination, be made to accomplish the function performed by the device of the patent.’ *Western Elec. Co. v. Home Tel. Co.* (C. C.) 85 Fed. 649; *Topliff v. Topliff*, 145 U. S. 156, 12 Sup. Ct. 825, 36 L. Ed. 658; *Gunn v. Bridgeport Brass Co.* (C. C.) 148 Fed. 239; *Ryan v. Newark Co.* (C. C.) 96 Fed. 100; *Simonds R. M. Co. v. Hathorn Mfg. Co.* (C. C.) 90 Fed. 201-208; *Gormully & J. Co. v. Stanley Cycle Co.* (C. C.) 90 Fed. 279; *Merrow v. Shoemaker* (C. C.) 59 Fed. 120.”

“A patent for a combination is not anticipated nor invalid for lack of invention because an expert may be able to build up the patented device by selecting parts taken from the prior art. (For other cases see *Patents Cent. Dig. Secs. 27-30*; *Dec. Dig. Sec. 26.*) *Kryptok Co. v. Stead Lens Co.*, 207 Fed. 85, 93.

“(C. C. A. 3rd Cir., 1913.) Each and every separate element of a combination may be old, and yet the combination as a whole may show patentable novelty and invention. (Decree 201 F. 356 affirmed.) E. H. Freeman Electric Co. v. Johns-Pratt Co., 204 Fed. 288.”

Invention has been defined to be:

“The double mental act of discerning in existing machines, processes, or articles, some deficiency and pointing out the means of overcoming it.” (*General Electric Co. v. Sangamo Electric Co.*, 174 Fed. 346, 351.)

---

**NEITHER THE SHELL COMPANY PRIOR USE AT MARTINEZ  
NOR THE COFFEY PATENT No. 1,158,107 WAS PLEADED.**

Plaintiff at the opening of the trial presented a proposed amendment to the answer, in which the above-mentioned Coffey patent and certain other patents of Coffey, including the patent in suit as well as the Shell Company's 1915 prior use, were attempted to be set up as anticipations. The motion to amend was denied as being negligently interposed by the plaintiff.

It cannot therefore be used for anticipation.

*Morton v. Llewellyn*, 164 Fed. 693 (C. C. A. 9th, Judges Gilbert, Ross and Morrow):

“The law is well settled that the defendant to a suit for infringement must give notice in his answer of any defense by way of prior patents, publications, or public use, if he desires to prove any of such defenses to show

want of novelty or invention in the patent sued on. Otherwise such defenses are receivable in evidence only to show the state of the art, and to aid in the proper construction of the patent.”

---

#### LACHES OF PLAINTIFF.

The reckless and rambling charges made so frequently in the past by plaintiff against this defendant and its officers, with never any attempt to see whether their insinuations and suspicions had any foundation in substance, are even reflected in plaintiff's brief on appeal.

After referring to the Coffey patent No. 1,158,107, which is *not* in suit and which was not pleaded, plaintiff says at page 10 of its brief:

“It is submitted that defendant's structure also infringes this patent (Coffey 1,158,107) but, *owing to lack of information* at the time the suit was brought, infringement of this patent was not charged in the bill.” (Italics ours.)

And on page 37 plaintiff states:

“It was shown on the trial that the defendant had several times modified the form and details of its construction and that at least *one of the other patents of the plaintiff is probably infringed* at this time by the latest modification of defendant's device.” (Italics ours.)

Then at page 38 we are virtuously told:

“The owner of a patent may lawfully warn others against infringement and give notice

of his invention to enforce his right *if done in good faith.*" (Italics ours.)

Inasmuch as the plaintiff's construction has remained practically unchanged since 1919 when the present wood tower and brass ribbon construction was evolved; and it is admitted that the plaintiff and defendant are not only in the same line of business and dealing in the same territory; it is reasonable to presume that ample opportunity was offered plaintiff and its agents at all times to learn exactly what the defendant was doing. This should be especially so when we consider that a cooling tower is not something capable of being concealed in the vest pocket.

The obvious answer to the direct and indirect charges of infringement now made of other patents of plaintiff by defendant is that said statements are utterly untrue and unfounded, as seen by a most cursory study of the two claims of the Coffey patent referred to *but not in suit.*

We shall not waste our time or that of the Court in further answering such a petulant, if not frivolous, charge made at this late date. Were the charge made in good faith, it would be appropriate to refer to numerous cases on the subject of "conscience, good faith and reasonable diligence".

"The defense of want of knowledge on the part of one charged with laches is one easily made, easy to prove by his own oath, and hard

to disprove; and, hence, the tendency of courts in recent years has been to hold the plaintiff to a rigid compliance with the law which demands, not only that he should have been ignorant of the fraud, but that he should have used reasonable diligence to have informed himself of all the facts.”

*Foster v. Mansfield*, 146 U. S. 88, 99.

Recently the Circuit Court of Appeals for the Third Circuit in *Window Glass Machine Co. v. Pittsburgh Plate Glass Co.*, 284 Fed. 645, 649 (a patent case) said:

“The circumstances were such, without repeating them at length, that the plaintiffs knew or were chargeable with knowledge of the practices and the apparatus employed by the defendant at its several works during these periods. On these facts and circumstances the defendant makes the defense of laches.

\* \* \* \* \*

“In *Prince’s Metallic Paint Co. v. Prince Mfg. Co.*, 57 Fed. 938, 944, 6 C. C. A. 647, 652, Judge Acheson, speaking for this court, stated the principle as follows:

“‘In courts of equity the rule is to withhold relief where there has been unreasonable delay in prosecuting a claim, or long acquiescence in the assertion of adverse rights. Again and again has it been judicially declared that nothing can call into activity a court of equity but “conscience, good faith and reasonable diligence”.’”

The force of these decisions is directly applicable to plaintiff’s belated claim on the Coffey patent in suit.



NEITHER THE SHELL COMPANY PRIOR USE NOR THE COFFEY 1915 PATENT NOR ANY OF THE PATENTS OF THE PRIOR ART EMBODY THE BRAUN CONCEPT.

There is a little paper model in evidence as Defendant's Exhibit "QQ" (R. 303), which will illustrate the Coffey construction and the mode of hanging the louvers on the tower.

If one turns to the Coffey 1915 patent, the drawing of which is reproduced on the opposite page, it quickly becomes manifest how different the Coffey steel tower is from the Braun construction. Referring to the Coffey drawings opposite:

Fig. 1 is a plan view of the tower.

Fig. 2 is an elevation of the tower.

Fig. 3 is a section on line 1-1 of Figs. 1 and 2 (the horizontal lines of the zigzags of Fig. 3 being merely the visible top edges of the end louvers and are not braces at all).

Fig. 4 is an intermediate vertical girder post.

Fig. 5 is a corner post.

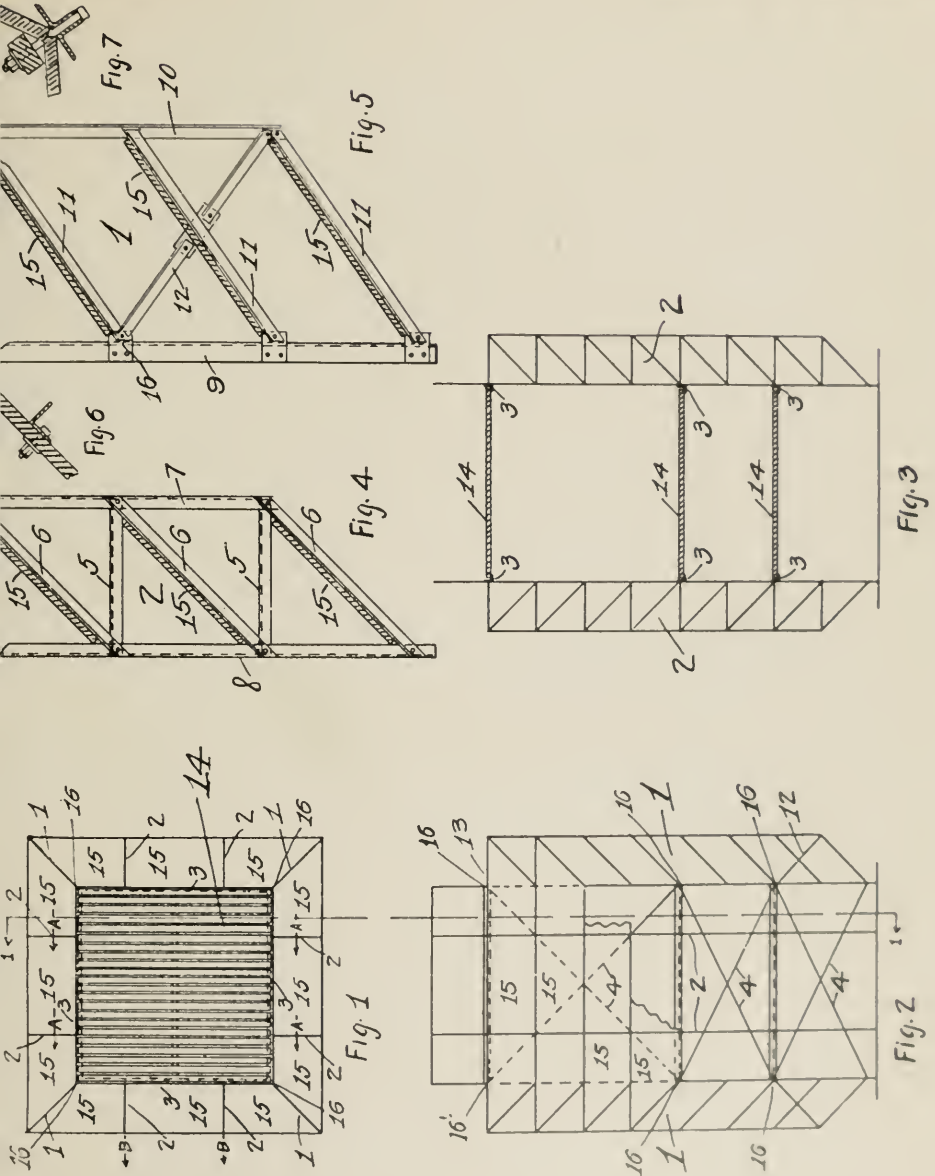
Figs. 6 and 7 are details of fastening means for the louvers to the respective posts 1 and 2.

The tower is essentially a steel tower, depending for inherent strength on its internal cross bracing of the tie-rods 4.

The patentee refers, just as do the blueprints in the Shell Company, to the use of two types of posts—one known as "corner posts," of which there are four and numbered 1 in the drawing, and

1,158,107.

Patented Oct. 26, 1915.

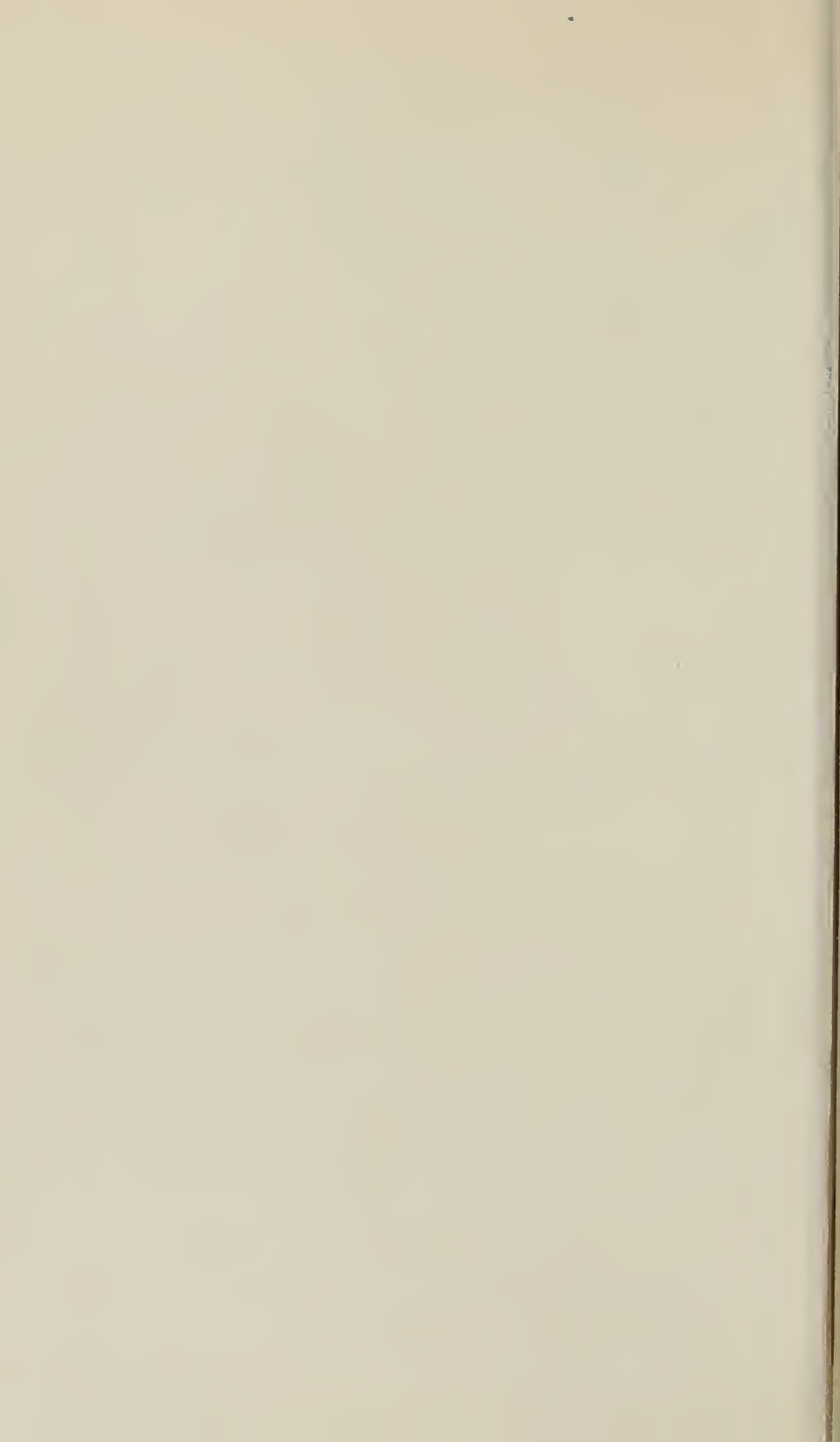


Witnesses

*Amey Mudd*

Inventor.

*Benton Coffey*



the other "intermediate posts" or "latticed girder posts 2" as they are spoken of in the patent. The louvers are numbered 15 (see line 102 of the patent and Fig. 5 of the drawings).

Note that these louvers 15 (Fig. 5) rest on inclined supports 11 and can add nothing to the stability of the structure but rather increase the dead weight that must be hung on the outside of the tower proper. Manifestly, there is nothing in this patent even remotely suggestive of the Braun concept.

In regard to the Martinez towers for the Shell Oil Company, Mr. Braun being called as a witness for the plaintiff and shown the blueprints in evidence of the Shell Company job says (R. 153):

"We received drawings at least very similar to these. I cannot remember detail drawings since 1914."

Thus (R. 164):

"The COURT. I suppose the idea is that the details of this tower are such that your contention would be that the patent as issued to the defendant was a very similar device in some way.

"Mr. FOULDS. The identical thing, and I want the Court to understand this."

The futility of the plaintiff's efforts as showing any frame and louver construction and support in the Shell Company drawings comparable with the construction evolved by the defendant and covered by its patent in suit is seen by the attempt

to construe the support for the walk or trackway around the tower of the Shell Company construction as comparable with the patented Braun construction.

Thus at R. 165 on direct examination of plaintiff's counsel Braun testifies:

“Q. And was the horizontal deck frame substantially a continuation of this horizontal louver support? A. No. \* \* \*

“A. This horizontal support is a walk support. You made the statement that it was a horizontal louver support.”

---

PLAINTIFF'S SHELL OIL COMPANY TOWERS AT MARTINEZ  
IN NO WAY INVOLVED THE BRAUN CONCEPT.

(R. 197):

“The first two towers built at Martinez were substantially as shown on the drawings. These towers had steel main columns, from which the louvers were supported by small steel members. The decks were supported by transverse wooden members bolted at each end to the column. There was *no connection structurally between the decks or the deck supports and the louvers* or louver supports. The overflow troughs were of a tapered type; shown in one of the Coffey patents. The distributing deck was spaced by *loose splines*; the longitudinal decks were spaced by *loose splines* and secured to the transverse members by lag screws or nails. There was no redistributing deck in the tower. That is briefly a description of that tower.” (Italics ours.)



Again Braun says (R. 201):

“Q. Now, what contribution to the strength of the tower, if any, did the louvers and their supports in the 1915 tower bear to the rest of the structure? A. None.

\* \* \* “the transverse members supporting the deck and tying columns together are not connected to any of the louver members.”

Continuing Braun says (R. 224):

“The distinctive difference between the louvers of the original Shell towers and the towers that we are now building is the fact that they were not in panel, and that they were *not rigidly fastened to the angular members in such a manner as to give structural strength.*”

---

**PLAINTIFF VOUCHES FOR BRAUN'S CREDIBILITY.**

Plaintiff having called Braun as its witness, vouches for his credibility; particularly since they made no attempt to call any other witness on the subject to attempt any disapproval of Mr. Braun's frank and candid statements even were his testimony capable of impeachment.

“We have noted that the individual defendants had filed answers under oath. It is to be observed, also, that two of them, Row and Thompson, were called as witnesses by the plaintiff. By calling them as witnesses, the plaintiff asserts that they are credible persons, and is estopped from impeaching their credibility.”

*Standard Water Systems Co. v. Griscom-Russell Co.*, 278 Fed. 704.

BRAUN DESCRIBES THE SHELL OIL COMPANY DRAWINGS  
AND SHELL STRUCTURE.

Mr. Braun says (R. 291-292):

“A. These drawings are not entirely complete, and they are not to scale, that is, they are distorted so that the drawing does not show clearly to the observer the relative location of all parts.”

---

SHELL DRAWINGS INCOMPLETE.

“These drawings are not entirely complete, some drawings being referred to which are not here, but with the aid of the specifications and my slight memory of the structure, I feel confident that I can describe it with reasonable accuracy.

Referring to drawing No. 116, showing the outlines of the tower, it will be seen that the tower consists essentially of a number of columns supporting on one side decks and on the other side louvers. These columns are of three types, namely, ‘L. P.,’ standing presumably for ‘louver posts,’ ‘I. P.,’ standing presumably for ‘intermediate posts,’ and ‘C. P.,’ standing presumably for ‘corner posts.’ These markings appear on the drawing 116, and on the respective detail drawings of these members.”

(NOTE: Although the 1915 Coffey patent refers as we have seen, to “corner posts” and “intermediate posts”, it makes no reference to “louver posts”.)

Referring to the Shell specifications and in further support of the difference between the plaintiff’s steel tower Shell construction and defend-

ant's patented wood construction, Mr. Braun reads from the Shell specification. He says (R. 295-296):

“I refer to Fig. 8 of the specifications, marked ‘Plan view, corner of tower’; this sketch shows a temporary bracing from the vertical column to the appended louver supporting bracket. I read particularly the following paragraph from this specification, this paragraph being entitled, ‘Temporary bracing’:

“‘In both steel and wood construction the outstanding parts of the C. P. posts should be accurately set at 45 degrees and held by temporary wood struts before laying the louvers as illustrated in Fig. 8. Put in as many struts as required to take any twist or bend out of the post. Any twist or bend in the I. P. or L. P. posts should be likewise taken out before bolting up. After the louvers are completed the open spaces’—this has no further bearing. *I have referred particularly to Fig. 8 to show that the louver-supporting members are not an integral part of the tower structure, and have practically no strength to resist rotation in a direction around the vertical axis of the column.*”

Braun says (R. 294) concerning the hangers for supporting the louvers:

“They are *therefore not an extension of the deck-supporting members*. I have shown this clearly on the sketch, which shows that the *deck-supporting members are attached to the column at a point above the point at which the small, angular appended louver members are attached.*” (Italics ours.)

And again (R. 296) Braun says:

“The column in this case sets square with the tower so that it would be impossible to bolt the angle louver supporting members to the column without bending them.”

And again (R. 296-297):

“The transverse deck-supporting members are bolted directly to the columns in a manner similar to the way in which the transverse deck-supporting members are bolted to the L. P. posts.

\* \* \* \* \*

“These I. P. or intermediate posts differ in design from the L. P. posts principally in the fact that there are two angles instead of one angle to the main column.”

And again (R. 298), he says:

*“In all three types of columns there are no deck-supporting members extended beyond the column.”* (Italics ours.)



#### ROTATION OF LOUVER SUPPORTS ABOUT THE COLLARS.

Braun says (R. 303):

“Mr. TOWNSEND. Have you anything to add, Mr. Braun, to what you have already said?”

“A. Otherwise, I can add that the transverse deck-supporting members are attached to the columns by one eye-bolt and are therefore free to rotate to that point. I would like to introduce a small model to show that feature.

\* \* \* \* \*

“Mr. TOWNSEND. The little pasteboard model is offered as Defendant’s Exhibit ‘QQ.’ ”

(R. 304-305) :

“The COURT. What office does that which you call the vertical spacing member fulfill ?

A. I believe that it is an alignment member for holding these appended louver angles in alignment and properly spaced. These louver angles are quite light, and would not, by themselves, remain in alignment.

---

**STABILITY IN SHELL TOWERS DUE SOLELY TO INTEGRAL  
TIE RODS.**

“The point I wish to bring out particularly with this model is that these transverse deck-supporting members are not secured to either the louver-supporting members or the column in such a manner as to prevent rotation. *The louver members are, therefore, incapable of adding any strength to the stability of the tower; as the wind blowing against these louvers, particularly on the outside, would have a tendency to rotate the column on its base to the right, these appended louver supports can absolutely in no way whatsoever offer any resistance to that rotating effect; they would rotate as a whole; the stability of this Mitchell-Tappen tower, as shown by these drawings, this sketch exhibit ‘OO,’ and this model must be obtained solely from tie rods, guy wires, or some similar devices tying the columns together, and attached at such angles as to resist rotation of the column in space.*” (Italics ours.)



THAT THE LOUVERS OF THE SHELL CONSTRUCTION CAN GIVE NO MATERIAL REINFORCEMENT IS MADE MORE APPARENT WHEN THE GREAT LENGTH OF THE TOWER IS CONSIDERED WITH RELATION TO ITS WIDTH.

Thus Braun says (R. 305-306):

“These towers are relatively long with relation to their width and they are by selection installed transversely of the prevailing wind, that is, it is desired that the wind blow across the tower, rather than longitudinally of it, so that more wind will enter the tower. Any bracing, due to the end members, would not add material support to a long tower; they would have to be supported through the tower. As a matter of fact, referring to plan 116, the louver boards are laid upon the inclined supporting bracket marked 12 on drawing 59, which are very light members, which are attached to the end columns only by single half-inch rivets and are in no way extended into or secured to the tower structure in such manner as to prevent rotation of the appended bracket about the vertical axis of the column; that is, a wind blowing in the direction that I indicate by an arrow marked ‘Wind’ would, if the louvers were secured firmly to the appended brackets, tend to rotate the brackets about the column. As I have previously stated, these brackets would have practically no resistance, or no substantial resistance to the rotation about that column. *On the contrary, in the Braun structure these louver-supporting members are integral with and, in fact, a part of the structural members of the tower which project from the tower structure, and are substantial structural members, and are held from rotation either around the vertical axis of the tower or in the horizontal direction of the axis of the tower.*” (Italics ours.)

COFFEY'S LOUVERS HUNG ON OUTSIDE LIKE A FIRE  
ESCAPE.

Concerning the bracing and supports for the "Shell Steel Towers" relied on by plaintiff to anticipate defendant's Braun patent, Mr. Braun says (R. 308):

"They are attached to the columns and have no connection with the main frame, whatever; they are light and they are attached in exactly the same manner as a shelf bracket to a wall, or a fire escape to a building, and add absolutely nothing to the structural strength of the tower."

---

THE DECK MEMBERS IN THE MARTINEZ MITCHELL-TAP-  
PEN TOWER TERMINATED IN VERTICAL POSTS.

Thus Braun says (R. 381):

"The deck members terminated at the vertical posts and the tie rods were on the interior of the tower, and between the posts."

It is further emphasized on cross-examination by Mr. Braun (R. 382-383-384):

"There was a small angle connected by one rivet to the vertical column, and by one rivet to the vertical tie member, and this angle was to support the walk-away. It was not an extension of the deck in any sense of the word.

\* \* \* \* \*

*"I know that the two towers at Martinez became so unstable that they were condemned as being dangerous and unsafe.*

\* \* \* \* \*

“The framework was condemned as being unsafe to withstand any unusual condition such as wind.

\* \* \* \* \*

“The COURT: How long were those towers there at Martinez?

“A. They were there about four years.

\* \* \* \* \*

“All cooling towers waters have concentration of salts, and that is one of the reasons that cooling towers have to be made very strong.”

Plaintiff's counsel attempted on the trial to make it appear that a bracket nailed onto the outside of a post in continuation or substantial continuation of a deck member is the same as a Braun construction. There are any number of practical answers to this hypothetical condition.

Bearing in mind the operative conditions of a cooling tower of the Braun type, including loads and stresses and the practical considerations involved, it would seem strange that if the problem is as simple as the plaintiff would have us believe it is, that no one did it in the Braun way before or did anything that would approach the Braun principle of restrained beam and cantilever structure as distinguished from an ordinary simple beam and louver bracket construction of the prior art.

These differences in principle are more fully explained in Mr. Moser's affidavit with reference to his stress chart appended thereto and reproduced herein.

Further than that it is to be pointed out that the Braun type of tower involved the fewest number of members and the fewest structural members and structural details. It can be assembled in the shop in units ready for erection in the field, whereby the field work is reduced to a minimum. The co-operation of the main deck members and the louver members result in members of light weight, presenting no structural difficulties in fabrication or erection. It is not sufficient that the connection between the deck member and the post alone be as strong as the unbroken deck member. In the plaintiff's towers the deck member is very much heavier than the horizontal louver member. Consequently the continuity of strength passed in the post is impossible, regardless of the details of connection.

The steel frame of a building is not comparable with the steel frame of a cooling tower. In the steel frame of a building the girders carry exceptionally heavy loads and they must center in the post. You cannot have them hanging on the side, and moreover they must be in the same plane, otherwise the concrete or stone wall, or whatever you have, will not inclose with the steel.

---

**BRAUN IDEA NOT ANTICIPATED NOR SUGGESTED BY  
PRIOR ART.**

Mr. Chas. Moser, of the Engineering Faculty of Stanford University, was called by defendant as an



expert to compare the Braun patented structure with the prior art, and with particular reference to the Hart patents which are really the only patents worthy of consideration set up to anticipate or limit the Braun patent.

In connection with his affidavit (see book of exhibits R. 86-98), Mr. Moser submits a graphic chart, which is reproduced on the opposite page, to show the outstanding differences, both in construction and principle, between the patented Braun all-wood tower and the towers of the prior art.

Mr. Moser's affidavit is illustrated by some little wooden models, in evidence as Exhibits Moser Models "A," "B" and "C" (so-called "Model G" is Exhibit "G").

Moser's Model "A" illustrates the Hart structure as shown in patent No. 1,228,207, it being kept in mind that this Hart patent was one of the principal references relied on by the Patent Office to meet the Braun claims as appears by reference to the Braun File Wrapper.

In that connection it is also worthy to be pointed out that the presumption of validity of the patent is enhanced rather than diminished by the fact that the art most strongly relied upon by parties seeking to avoid infringement or to defeat a patent was considered by the Patent Office Examiner.

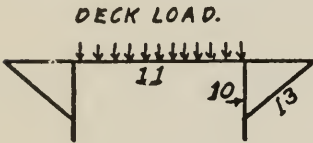
Moser's model Exhibit "B" exemplifies plaintiff's construction illustrated in blueprint No. 59, or the old 1914 Shell Company steel tower.





**DIAGRAM "MOSER D"**  
 SHOWING RELATIVE STRESSES  
 IN TOWER MEMBERS.

BRAUN TYPE.

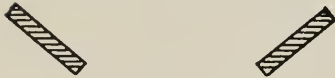


STRESS DIAGRAMS FOR DECK LOADS.

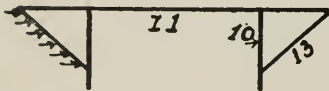
MEMBER 11. BENDING.



MEMBER 13. TENSION.



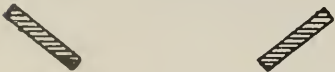
LATERAL LOAD.



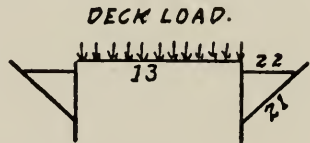
MEM. 11. BENDING AND TENSION OR COMPRESSION.



MEM. 13. TENSION OR COMPRESSION.



PLAINTIFF'S AND HART TYPE.

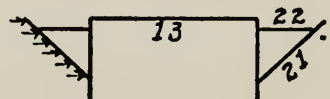


MEMBER 13. BENDING.



MEMBERS 21 AND 22 ARE IDLE.

LATERAL LOAD.



UNSTABLE FOR LATERAL LOAD.

Moser's model Exhibit "C" typifies the Braun construction of Braun patent No. 1,442,784 charged in the counter-claim to be infringed by plaintiff.

Moser's model Exhibit "G" represents the Shell Company's construction according to the plaintiff's patent (R. 197).

In the diagrammatic sketch (Moser Exhibit "D") reproduced supra, the reference numerals correspond respectively to those in the Braun patent No. 1,442,784 and the Hart patent No. 1,228,207; the object of this sketch being to contrast the effective action of the structural elements and stresses in the two types of towers.

Mr. Moser saying (R. 90):

"First by showing the deck load and the effect of *bending* stresses on the horizontal members, and secondly by showing the *lateral* load and the effect upon the horizontal members when the lateral load is imposed." (Italics Moser's.)

It can readily be understood that the so-called "bending stresses" result from the deck load imposed by the weight of the water. That this weight is tremendous is emphasized by the fact that in one of these Braun towers now in use over 100,000 gallons of water per minute, weighing 8.33 lbs. per gallon means the distribution of *a total load of over 800,000 lbs. within the tower structure every minute!*

The lateral load or stresses referred to by Mr. Moser mean the effect of windage.

With these factors in mind, it becomes easier for the lay mind to appreciate something of the problem that confronts the engineer in the building of a successful cooling tower, particularly where it would be made entirely of wood and cross braces are to be eliminated.

In considering Mr. Moser's explanation it is to be borne in mind that no distinction is made between the Hart type of tower and the plaintiff's type of tower, inasmuch as in both there is an absence of any cooperation or strength giving qualities between the louver construction and the frame construction and likewise in both Hart and plaintiff the stability of the structure depends almost entirely on cross bracing within the tower.

Referring to diagram Moser D it will be observed that the horizontal deck member has a maximum bending stress at the vertical post. Since the horizontal member continues unbroken beyond the post the connection with the post may be made by means of a single bolt at the center of the horizontal member. The diminution of the strength in the horizontal member due to this hole is negligible.

Mr. Moser points out (R. 91):

“From a structural standpoint both the Hart and the plaintiff's towers consist of two more or less independent structures, namely the main supporting structure comprising the vertical posts which are marked 10 in the Hart patent mentioned, and the horizontal framing member marked 13, and the accessory structure com-

posed of the inclined members or louvers marked 21, and the horizontal ties marked 22. The panel marked 25 in the Hart patent is included to hold the two bents in proper relation to each other, but forms no essential element of the structure.

*“In both the Hart and plaintiff’s towers the louvers and horizontal ties are designed solely as wind-brakes and constitute an added load on the main frame without contributing in any measureable degree to its structural stability. These two portions of the tower do not cooperate in any substantial manner in carrying loads. Thus, in carrying the vertical deck load, the main horizontal framing member 13 is deprived of the assistance which the outstanding horizontal member 22 might have furnished had it been a continuation of the horizontal member 13 instead of being a separate member.*

*“Likewise, the outstanding horizontal member or tie 22 of Hart or plaintiff can receive no assistance from the main horizontal member 13. Consequently, the field of action of the outstanding member 22 is very limited and it can support no vertical load except the louver 21 be in place. Therefore, each of the horizontal members 13 and 22 must independently support its own loads.” (Mr. Moser’s italics.)*

As showing what the effect of high windage force would be even on a small tower of the Hart-plaintiff type Mr. Moser says (R. 92):

*“With respect to a horizontal load as the force of wind which on a cooling tower 20 feet high and 50 feet long amounts to 30,000 pounds, the two portions, either individually or collectively, are without stability. This situation is due to the fact that the main hori-*



zontal framing member 13 and the outstanding horizontal member 22 supporting the louver are separate pieces whose end connections at the main vertical posts 10 are incapable of preventing rotation when in actual horizontal working load is applied to the structure against the panels 25."

Concerning the deck loads and bending stresses Mr. Moser says (R. 90):

"By comparing the *bending stress* diagrams for *deck loads* it will be seen that the horizontal members of the Braun tower undergo *less stress and strain* than the horizontal members of the Hart or plaintiff's towers. This situation is due to the fact that members 13 in Braun act as tension members to relieve and distribute the stresses in the horizontal members, while in the Hart or plaintiff's structures members 21 and 22 are idle when the deck load is applied and do not so relieve the stresses in the horizontal deck supporting member. This situation is more fully explained in paragraph 6." (Moser's italics.)

In comparing the effect of lateral stresses on the Braun tower on the one hand and the Hart-plaintiff type of tower on the other, Moser says (p. 91):

"For lateral loads imparted against the side of the Braun tower the entire beam 11 of Braun and his opposite louver braces 13 will act in resisting the load, while in the Hart-plaintiff type of tower the structure will be *unstable as far as lateral load is concerned*.

"From the foregoing it will be seen that by the use by Braun of horizontal deck supporting members 11 which extend *beyond the posts* 10 and are tied thereto by the inclined members 13, the beams will be performing useful work

at all times and with less stress than in the Hart-plaintiff type of tower." (Moser's italics.)

Furthermore, Moser says (R. 93):

"In the Braun tower the various structural features as shown in the model Moser C are so designed and arranged as to constitute an integral structure, each element of which, (in addition to carrying its own locally imposed loads, as do the like members in the Hart and plaintiff's towers), is able and does make a substantial contribution toward the stability and efficiency of the structures as a whole, a function entirely lacking in Hart or plaintiff.

"In Braun the main horizontal framing member 11 extends outwardly beyond the main vertical post 10 to form the louver support instead of being cut to a length just sufficient to spike or bolt to the vertical posts 10 and requiring an additional horizontal piece for the louver support.

"The continuation of the horizontal framing member 10 in Braun beyond the post without cutting and tying it to the louver, forms a cantilever beam, making it possible for the various members of the structures to cooperate advantageously in a manner impossible in the Hart or plaintiff's type of tower."

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**ROTATIVE ACTION OF HART-PLAINTIFF LOUVER SUPPORT  
METHOD IN CONTRAST TO THE TRUSSED CONSTRUCTION OF BRAUN.**

Mr. Moser points out the rotary action or tendency to rotation of the Hart-plaintiff type of louver support in which he is supported by Mr. Braun.

On this point Moser says (R. 92):

“Referring to the models Moser A and B, I would say that I am aware of the fact that the ends of the horizontal members 13 and 22 are attached to the main vertical post 10 by either nails, bolts, pins or light brackets and that such attachments provide a joint with some slight degree of rigidity. However, while such joints may be said to be rigid with respect to the thrust of a man’s hand or the blow of a carpenter’s hammer, they are incapable of resisting the rotating influence of actual working loads and are therefore to be classed as pivoted joints, and in any event the construction of the louver cannot possibly add to the rigidity of the tower as a whole.”

And, again in his affidavit he says (R. 95):

“As previously pointed out in paragraph 4 the stability of towers of the Hart or plaintiff’s type against lateral loads does not involve the details of louver construction. Plaintiff’s Model G embodies features which illustrate this fact. Thus, assume the main vertical posts in position and the interior horizontal deck supports in place. In this condition the structure has no stability due to the fact that the horizontal members merely rest upon brackets attached to the main vertical posts, or are toenailed against the posts, affording a connection capable of carrying the vertical loads, but being unstable in the matter of rotation.”

In further emphasizing the distinction between Hart and plaintiff’s towers on the one hand and the Braun tower on the other, Mr. Moser says (R. 94):

“As previously pointed out the louvers in the Hart and plaintiff’s towers are incapable of con-

tributing in the slightest degree to the stability of the tower against horizontal loads because of the lack of continuity of the horizontal members. Whatever stability the Hart or plaintiff's towers may have is *independent of the louver construction*. On the other hand, by combining the horizontal framing member and the horizontal louver member in one unbroken member 11 in the Braun tower a very considerable degree of rigidity is attained which makes it possible to erect a considerable portion of the frame without the addition of any other system of bracing and contributing materially to the stability of the completed tower against horizontal loads." (Moser's italics.)

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THE BRAUN TOWER CONSTITUTES WHAT IS KNOWN AS A "RESTRAINED BEAM" WHILE THE HART-PLAINTIFF'S TOWER FORMS WHAT IS KNOWN AS A "SIMPLE BEAM".

Thus Mr. Moser says (R. 94):

"In the Braun tower the louver is able to make a substantial contribution to the capacity of the main horizontal member 11 in carrying the *deck loads*. The *horizontal member 11 with its continuation beyond the point of support at the post 10 in the Braun tower constitutes what is known as a restrained beam, since the outwardly extending cantilever ends of the member 11 are anchored down by means of the louver member 13.*

"In the Hart and plaintiff's towers the horizontal member 13 ends at the points of support at the posts 10, forming what is known as a simple beam. The deck loads of these members are uniformly distributed throughout their



lengths in each case. For the purpose of comparison it will be assumed that the loads are equal for the two beams.

“The effect of the restraint in the case of the horizontal member 11 in the Braun tower is to reduce the bending stress in the member very materially. For equal loads the maximum bending stress in the horizontal bending stress in the horizontal member 11 of Braun *will be one-half of the maximum bending stress in the horizontal member 13 in the Hart or plaintiff’s towers.*” (Moser’s italics.)

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**BENDING STRESSES IN BRAUN ONE-HALF THOSE IN THE  
HART-PLAINTIFF CONSTRUCTION.**

Thus, as pointed out by Mr. Moser (R. 95):

“The cross sectional dimensions of any structural member are largely determined by the stresses in that member. Since the maximum bending stress in the horizontal member 11 in the Braun tower is one-half of the maximum bending stress in the horizontal member 13 in the Hart and plaintiff’s towers for equal loads, it follows that the *horizontal member 11 in the Braun tower may be made much lighter than the horizontal member 13 in the Hart or plaintiff’s towers with equal degrees of safety so far as supporting the deck load is concerned. The relative magnitudes of the stress in the members of the two towers for equal loads are shown graphically on diagram Moser D.*” (Moser’s italics.)

On cross-examination Mr. Moser at R. 352 emphasizes this weakness in Hart-plaintiff’s structure, due to “rotation”:



“Because the members in that structure are so disposed that they have some structural stability. When I say ‘stability,’ I do not mean rigidity or brittleness, or anything of that sort. In this case it has very much less structural stability, Moser B, as there is very much less horizontal stability due to the fact that the connection between the horizontal deck member is insufficient to prevent rotation at its connection with the main vertical post.”

Mr. Braun, as we have already pointed out, has made reference to this rotative action in plaintiff’s structure and its absence in defendant’s patented structure.

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**SCHMIDT PATENT No. 693,625, FEBRUARY 18, 1902.**

This patent, in addition to its having been cited and withdrawn by the Patent Office Examiner in connection with the Braun application, is also considered by Mr. Moser, who says, in pointing out the differences between Schmidt and Braun (R. 196-197):

“My attention has also been called to the patent to Schmidt, No. 693,625, February 18, 1902. I have read and understand said patent.

“In the said Schmidt tower the lateral bracing of the tower is accomplished solely by inclining the main supporting posts B to form triangles having the foundation of the tower as bases. The horizontal deck supporting members b’ extend slightly beyond the inclined posts B to support the upright louvers E-e, but this connection of the short extensions of the joists b’ beyond the inclined posts B in no way has lateral bracing of the tower as in Braun.

“The louver E-e, therefore, is not an integral feature of the Schmidt tower with respect to stability, but merely constitutes an added load on the supporting frame of the tower. Further, the horizontal deck member b' acts independently of the louver and its action in carrying deck loads as shown accurately by the stress diagram for the horizontal deck member of the Hart-Plaintiff type shown on Diagram Moser D, in which the bending stresses are two times the bending stresses in Braun.”

And yet in the face of all the foregoing uncontradicted testimony the trial Court in its Memorandum Opinion gives only brief consideration to defendant's patent in suit, saying (R. 386):

“The defendant, however, counterclaims, claiming an infringement by virtue of the fact that the supporting members which hold up the various decks extend beyond the vertical members so as to support what are known as the ‘louvers,’ which are pieces of wood fastened to the outside, admitting the air and preventing the escape of the sprays of water.

“The prior state of the art was such that in place of these transverse members being continuous and extending out to support the louvers, separate pieces were nailed or spiked on to the vertical members.

*“In my opinion there is nothing novel in the device claimed by the defendant. It seems to have been anticipated by prior patents. Therefore, the injunction prayed for in the cross-bill will be denied.”* (Italics ours.)

It is believed that the Court failed to appreciate not only the merit of the Braun invention but the

features and characteristics constituting the invention and embraced in the claims, and we submit the decree should be reversed in this one particular.

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INVENTION.

To quote Judge Grosscup of the Circuit Court of Appeals, 7th Circuit, *Brown v. Crane Co.*, 133 Fed., 235, 237:

“The constitutional basis of the patent laws is to promote the progress of the useful arts by giving to him who creates something new and useful a property in the thing created; and, as I look at it, the life germ of any creation is not so much the mechanical form in which it finally becomes embodied, as the flash of inspiration that, out of the darkness in which it lay concealed, first revealed its possibility. The possibility of a thing once seen, it is of no great moment that a ready mechanical means of bringing it into form is at hand; nor that the mechanical means used are similar to those employed before in the allied arts; nor that any mind would have seen the adaptability, mechanically, of what already existed to what was now, for the first time, about to exist. The true inquiry is, Did any one before, in creative imagination, actually see this new thing? Did it not require invention to discern, in the first instance, that the new thing was possible? Is it not invention to bring out of what to others seems chaos the form and feasibility of the new and useful thing?

“Invention is not, in my judgment, confined to the concrete mechanical form into which an

idea ultimately evolves. Invention is the idea itself, the burst of new thought, the discovery; and patentable invention is the conjunction of these with appropriate and efficient mechanical means. Confessedly, an old idea, carried out mechanically in a new form, is patentable invention. To my mind a new idea, carried out mechanically in an old form, ought equally be regarded as patentable invention. To hold otherwise is to dethrone the head and enthrone the hands—to leave genuine genius unrecompensed, while placing the inventor's crown on mechanical skill."

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#### CONSIDERATIONS OF PRACTICABILITY CONTROLLING PATENTABILITY.

In *Kitchen v. Levison*, 188 Fed. 658, on Circuit Court of Appeals in sustaining a very simple invention on a manifolding book the Court said:

"But the device which is principally relied upon by the appellants is shown in the patent of H. G. and J. B. Barlow of April 28, 1884. This patent anticipates the appellee's patent in every feature except one. Instead of having their carbon sheet bound in the book as in the appellee's patent, it was loose. \* \* \* Eight (18?) years after the issuance of the Barlow patent the appellee conceived the idea of binding the carbon sheets with the stubs of the record sheets of the book so that the carbon sheets would always be in their place. \* \* \* The patent to James Bengough of January 28, 1896, shows a bound manifold sales book. \* \* \*

"In addition to the presumption which arises from the issuance of the patent to the appellee,



there are to be taken into consideration as sustaining his patent, the further facts that when his invention was made, there was a want in the art for such a device, that in the prior art there were well recognized and admitted defects, and that the appellee's device eliminated those defects and went into general and successful use."

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IT IS SHOWN BY THE EVIDENCE THAT THE BRAUN INVENTION HAS GONE INTO EXTENSIVE USE AND HAS, MOREOVER, BEEN COPIED BY PLAINTIFF.

"When although the patent was not a pioneer and the prior art discloses various apparatuses which employ from one to three of the elements of the combination claimed, though not in one combination, and where the elements as formerly known were modified so materially as that they would cooperate together as a whole in one combination to produce a new character of device in its class, held to be invention." (*Lamson Consolidated Store Service Co. v. Hillman*, 123 Fed. 416, 59 C. C. A. 510.)

As said by our Circuit Court of Appeals in *Morton v. Llewellyn et al.*, 164 Fed. 693:

"Apart from the presumption of novelty that always attends the grant of a patent, the law is that when it is shown that a patented device has gone into general use and has superseded prior devices having the same purpose, it is sufficient evidence of invention in a doubtful case. The Barbed Wire Patent, 143 U. S. 275, 292, 12 Sup. Ct. 443, 36 L. Ed. 154; Keystone Manufacturing Company v. Adams, 151 U. S. 139, 143, 14 Sup. Ct. 295, 38 L. Ed. 103; Irvine v. Hasselman, 97 Fed. 964, 38 C. C. A. 587; Wilkins Shoe Button



Co. v. Webb (C. C.), 89 Fed. 982; National Hollow B. B. Co. v. Interchangeable B. B. Co., 106 Fed. 693, 707, 45 C. C. A. 544.”

See also:

*Kitchen v. Levison*, supra.

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THE SIMPLICITY OF THE INVENTION IS NO GROUNDS  
FOR DENYING ITS PATENTABILITY.

*Kitchen v. Levison*, 188 Fed. 658, (C. C. A. 9th Cir.)

*S. F. Cornice Co. v. Beyerle*, 181 Fed. 692,  
(affirmed by C. C. A. 9th Cir. 195 Fed. 516);

*Pelton Water Wheel Co. v. Doble*, 186 Fed. 526 (affirmed by C. C. A. 9th Cir. 190 Fed. 761);

*Expanded Metal Co. v. Bradford*, 214 U. S. 366; 53 L. Ed. 1034.

The books are full of cases sustaining patents for their “simplicity”; for having been the one to “seek the end long sought,” of having taken “the last step that wins.”

*Agawam Woolen Co. v. Jordan*, 7 Wall. 583;

*Whiteley v. Swayne*, 7 Wall. 685;

*DuBois v. Kirk*, 158 U. S. 58;

*Washburn & Moen Mfg. Co. v. Beat 'Em All Barbed Wire Co.*, 143 U. S. 275;

*Babcock & Wilcox Co. v. North American Dredging Company*, 155 Fed. 265;  
*Maunula v. Sunell*, 155 Fed. 538;  
*U. S. Mitis Co. v. Midvale Steel Co.*, 135 Fed. 103.

See also *Diamond Tire Case*, 220 U. S. 428, where the Court said:

“To what quality the utility of the tire may be due will bear further consideration, if for no other reason than the earnest contentions of counsel. Aside from those contentions and the ability by which they are supported, we might point to what it does as a demonstration of its difference from all that preceded it, that there is something in it, attribute or force, which did not exist before,—something which is the law of its organization and function, and raises it above a mere aggregation of elements to a patentable combination. And we may say, in passing, the elements of a combination may be all old. In making a combination the inventor has the whole field of mechanics to draw from. *Leeds & Catlin Co. v. Victor Talking Co.*, 213 U. S. at page 318, 53 L. Ed. 812, 29 Sup. Ct. Rep. 495.”

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#### SIMPLE INVENTIONS.

See the *Eye Shade case: Mahoney v. Malcom*, 143 Fed. 124 (C. C. A. 7th Circuit), when Judge Baker said:

“The patent is for an eye shade made of two pieces of flat, thin, light, flexible material, such as celluloid. \* \* \*

“Twelve earlier patents are shown in the record, ranging in date from 1876 to 1899. Ten

of them, and they cover the whole period, are for various modifications or improvements of the old, stiff, curved visor. \* \* \* After the publication of appellant's patent 26 years later, it was easy enough to see that if Platt's rigidly curved head band were turned up at right angles to the horns of the rigidly curved visor (a position that was never intended in use or not in use) and then the whole were hammered flat, the result might serve as a pattern for cutting from flexible material something that would resemble appellant's eye shade. But Platt did not do it; neither did any of the other eleven inventors who during those years were animated with the hope of capturing the trade by producing an eye shade that was better for the manufacturer, for the merchant, and for the wearer. \* \* \*

"We think there was invention of the 'happy thought' kind, as explained in *Williams v. American String-Wrapper Co.*, 86 Fed. 641, 30 C. C. A. 318, and in *Eastman v. Mayor of New York (C. C. A.)*, 134 Fed. 844. As we said in *Regent Mfg. Co. v. Penn Electrical Co.*, 121 Fed. 80, 57 C. C. A. 334:

"The device seems exceedingly simple; but its very simplicity, in such an old field, should be a warning against a too ready acceptance of the ex post facto wisdom of the bystander."

"The decree is reversed, with the direction to enter a decree in appellant's favor for an injunction and an accounting."

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#### ENVELOPE CASE.

As said by your Honors in the case of *Heinz v. Cohn*, 207 Fed. 547, 559-60, on a simple invention for the so-called "Window Envelope":

“On the other hand, many instances may be found where very simple concepts have been declared to be the product of inventive genius. Two instances which are fair illustrations are referred to in *Potts v. Creager*, *supra*. One was respecting the application to telegraph instruments of a torsional spring such as had been previously used in clocks, doors, and other articles of domestic furniture (*Western Electric Company v. La Rue*, 139 U. S. 601, 11 Sup. Ct. 670, 35 L. Ed. 294) and the other the substitution of the use of anthracite coal for bituminous in smelting iron ore, inasmuch as it produced a better article of iron at less expense (*Crane v. Price*, *Webster’s Pat. Cas.* 409). Thus it is that simplicity of device is not necessarily the test of lack of invention or patentability. When a thing has succeeded it often seems very plain and simple and the wonder is that its suggestion had not come earlier; but the fact remains that no one has ever thought of it, whether skilled or not, and yet its utility is at once recognized when brought to public attention. This of itself is evidence of invention. As is said by Mr. Justice Bradley in *Loom Co. v. Higgins*, 105 U. S. 580, 591 (26 L. Ed. 1177):

“‘It may be laid down as a general rule, though perhaps not an invariable one, that if a new combination and arrangement of known elements produce a new and beneficial result, never attained before, it is evidence of invention.’

“Beyond this, the presumption of novelty attending the issuance of letters patent, the general and extensive use to which the new device is applied, and further the use persisted in by one infringing the device are all evidence of the product of inventive faculty and genius. Dia-

mond Rubber Co. v. Consol. Rubber Tire Co., 220 U. S. 428, 31 Sup. Ct. 444, 55 L. Ed. 527; A. R. Milner Seating Co. v. Yesbera, 133 Fed. 916, 67 C. C. A. 210; Buchanan v. Perkins Electric Switch Mfg. Co., 135 Fed. 90, 94, 67 C. C. A. 564; Morton v. Llewellyn et al., 164 Fed. 693, 90 C. C. A. 514.”

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MAKING IN ONE PIECE INSTEAD OF TWO HELD  
INVENTION.

*The collar button case: Krementz v. Cottle Co.*, 148 U. S. 556; 37 L. Ed. 559.

The Court in finding that the patented one-piece collar button was better, stronger and less liable to break than the old several piece buttons found invention involved and said:

“It is not easy to draw a line that separates the ordinary skill of a mechanic, versed in his art, from the exercise of patentable invention, and the difficulty is specially great in the mechanic arts, where the successive steps in improvements are numerous, and where the changes and modifications are introduced by practical mechanics. In the present instance, however, we find a new and useful article, with obvious advantages over previous structures of the kind. A button formed from a single sheet of metal, free from sutures, of a convenient shape, and uniting strength with lightness, would seem to come fairly within the meaning of the patent laws. The tools to be used in making the button are not described, but they are not claimed to be new. And the method or process of manufacture is described with suffi-



cient particularity to enable anyone skilled in the art to follow it. Buttons made of several pieces are liable to break at the soldered joints, and it is stated by an experienced witness that the metal by the process of soldering becomes soft and liable to bend. The different pieces are set together by hand, and are not always uniform or put together truly.”

Continuing the Court contrasted the conduct of the parties, as may be done here, in showing invention. To quote:

“The view of the Court below, that Krementz’s step in the art was one obvious to any skilled mechanic, is negatived by the conduct of Cottle, the president of the defendant company. He was himself a patentee under letters granted April 16, 1878, for an improvement in the construction of collar and sleeve buttons, and put in evidence in this case. In his specification he speaks of the disadvantages of what he calls ‘the common practice to make the head, back, and post of collar and sleeve buttons separate, and to unite them by solder.’

“His improvement was to form a button of two pieces, the post and base forming one piece, and then soldering to the post the head of the button as the other piece. Yet, skilled as he was, and with his attention specially turned to the subject, he failed to see, what Krementz afterwards saw, that a button might be made of one continuous sheet of metal, wholly dispensing with solder, of an improved shape, of increased strength, and requiring less material.”

Commercial success was also a factor to consider, the Court saying:

“It was also made to appear that the advantages of the new button were at once recognized by the trade and by the public, and that very large quantities have been sold.

“The argument drawn from the commercial success of a patented article is not always to be relied on. Other causes, such as the enterprise of the vendors, and the resort to lavish expenditures in advertising, may co-operate to promote a large marketable demand. Yet as was well said by Mr. Justice Brown, in the case of Consolidated Brake Shoe Co. v. Detroit Steel & S. Co. 47 Fed. Rep. 894, ‘when the other facts in the case leave the question of invention in doubt, the fact that the device has gone into general use and has displaced other devices which had previously been employed for analogous uses, is sufficient to turn the scale in favor of the existence of invention.’

“Webster Loom Co. v. Higgins, 105 U. S. 580 (26, 1177), was a case where the patented device consisted in a slight modification of existing mechanism, and it was contended that this slight change did not constitute a patentable invention; but this view did not prevail, the court saying:

“‘It is further argued, however, that supposing the devices to be sufficiently described, they do not show any invention, and that the combination set forth in the fifth claim is a mere aggregation of old devices already well known, and therefore it is not patentable. This argument would be sound if the combination claimed by Webster was an obvious one for attaining the advantages proposed, one which would occur to any mechanic skilled in the art; but it is plain from the evidence, and from the very fact that it was not sooner adopted and used, that it did not for years occur in this light to even the most

skilled persons. It may have been under their very eyes; they may almost be said to have stumbled over it but they certainly failed to see it, to estimate its value, and to bring it into notice. Who was the first to see it, to understand its value, to give it shape and form, to bring it into notice and urge its adoption, is a question to which we shall shortly give our attention.

“At this point we are constrained to say that we cannot yield our assent to the argument that the combination of the different parts or elements for attaining the object in view was so obvious as to merit no title to invention. Now that it has succeeded it may seem very plain to anyone that he could have done it as well. This is often the case with inventions of the greatest merit.’ \* \* \*

“We think, therefore, we are within the principle and reasoning of these cases in reversing the decree of the Court below dismissing the bill and in remanding the record, with directions to proceed in the case in conformity with this opinion.”

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**CONDUCT OF PLAINTIFF IN ADOPTING THE PATENTED  
BRAUN TOWER IS PROOF OF INVENTION.**

The presumption of novelty arising from the grant of the patent and the fact that the defendants think so well of the device that they use it themselves, has frequently been assigned by the Courts as the principal reasons for holding an invention patentable.

“The fact that a patentee, by his device, produced results which intelligent and ingenious

inventors in the same art had sought for years without avail, and that such device went into immediate and extensive public use, and was furthermore used by the defendant, tends strongly to show that it was the result of inventive faculties." (*Dowagiac Mfg. Co. v. Superior Drill Co.*; *P. P. Mast & Co. v. Same*, 115 Fed. 88, 53 C. C. A. 36 (6th Cir.).)

"Where, upon suit for infringement, alleged anticipating constructions are set up by the defendant, the fact that he appropriated the complainant's production as to the foundation of his own business and had been very successful, is persuasive evidence of the advantages of the complainant's structure over the alleged anticipatory constructions." (*A. R. Milner Seating Co. v. Yesbera*, 133 Fed. 916 (6th Cir.).)

"The questions mainly argued relate to whether or not invention is present, particularly in view of the prior art. That utility is present, it is said, is shown by the *prima facie* presumption resulting from the issue of the patent and from substantial sales and use. The evidence tends to show that 1,000 a month are being made and sold. Whether these sales are evidence of utility in the device, *or senility, or some form of arrested mental development in the buyer*, may well be open to question. The defendant, however, has made a substantial copy of this device, and is not, therefore, in a position to deny its patentable utility; and for this reason, coupled with the *prima facie* presumption, it must be held that the patent is not void for want of utility. See *Faultless Rubber Co. v. Star Rubber Co.* (6 C. C. A.) 202 Fed. 927, 930, 121 C. C. A. 285; *Diamond Rubber Co. v. Consolidated Tire Co.*, 220 U. S. 428, 440, 31 Sup. Ct. 444, 55 L. Ed. 527." (Italics ours.)



*(Vaco Grip Co. v. Sandy MacGregor Co., 292 F. 249 (251).*

In *Hobbs v. Beach*, 180 U. S. 383, the Supreme Court said:

“If there be one central controlling purpose deducible from all these decisions, and many more that might be quoted, it is the steadfast determination of the Court to protect and reward the man who has done something which has actually advanced the condition of mankind, something by which the work of the world is done better and more expeditiously than it was before.”

“In the law of patents, it is the last step that wins,” says the Supreme Court:

*Barbed Wire Case.*

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PROOF OF INFRINGEMENT BY PLAINTIFF AS TO  
PASADENA ICE COMPANY.

Mr. Braun says (R. 369) that he is familiar with the Pasadena Ice construction and saw it during its erection and between January 16, 1923, when the patent issued and the time when the counterclaim was filed on February 20, 1923.

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PLAINTIFF'S INFRINGING TOWER SHOWN IN PHOTO-  
GRAPHS EXHIBIT "M M" (R. 281) AND BLUE PRINT  
EXHIBIT "N N" (R. 281).

As to the Pasadena Ice Company's infringing structure Braun says (R. 370):



“A. The structure is very similar to the second Braun patent. The deck supports extend beyond the posts and receive the louver boards, in a manner exactly similar to that shown on the model Exhibit ‘D’.

“Q. Do these cross-members appear in the photographs before you, of which there are six of the Pasadena Ice Company?

“A. Yes, they appear in all six photographs.

“Q. And the louvers and their supporting connections, are they sufficiently clear for ordinary understanding?

“A. Yes. One photograph shows the supporting connection with the louver board, and the other photographs show the supporting connections with the louver boards laid in place.”

---

THE DRAWING OF THE TOWER IN EVIDENCE MADE UNDER THE DIRECTION OF THE WITNESS SHATTUCK (DEFENDANT'S EXHIBIT “N N”—R. 281).

There has been no denial whatsoever that if the Braun patent is valid it is infringed.

Mr. Shattuck testifies (R. 269) in corroboration of Braun:

*“I saw the plaintiff's name-plate on the tower. I saw the contract, and the date of the contract on that particular tower.”* (Italics ours.)

(R. 270):

“The contract was in the possession of the owners of the tower.

\* \* \* \* \*

*“My statement was based on the fact that I saw the contract and saw the name-plate on the tower.”* (Italics ours.)

“The COURT. The contract between the owner and the plaintiff? A. Yes.

“Q. Did the contract include the work of erecting the tower?

“A. I was not allowed to read the contract.”

(R. 271):

“Mr. TOWNSEND. We will call on the plaintiff to produce that contract which they have with the Pasadena Ice Company.”

This request was not complied with.

---

**PLAINTIFF'S COUNSEL ADMITS LIABILITY OF THE  
COOLING TOWER COMPANY.**

Thus at (R. 273):

“Mr. FOULDS. \* \* \* He (Fleming) sends on the data to us and we send a contract, which may be filled out in his name and may be filled out in the purchaser's name, that is, the user's name, and the man here in California, or the purchaser or customer may get the wood; in other words, we give them the plan for the tower.

“The COURT. In effect, you constitute them a licensee under your patent?

“Mr. FOULDS. That is it.

“The COURT. All right. If you license them, that is, you license the user to contract that tower for his own use, is the company any less an infringer than if it came out and actually constructed the thing?

“Mr. FOULDS. It would depend on how they constructed that tower. If they did put in some tower that was not in accordance with the plans, the company would not be.

“The COURT. If they went ahead and added something that was not in accordance with the plans, that would be right. I see your point there.”

---

PHOTOGRAPHS ARE IN EVIDENCE SHOWING THE INFRINGING TOWER AS DEFENDANT'S EXHIBIT “M M” (R. 281).

Concerning the notations on the back of the photographs witness Shattuck says (R. 277):

“The patent numbers on the back of these photographs which I made notes of and put on on my return to the office the day I climbed on the tower.

\* \* \* \* \*

“Q. And the name-plate was the name-plate of the Cooling Tower Company? A. Yes.

“The COURT. Are these the numbers of the patents owned by your Company?

“Mr. FOULDS. Yes. That seems to be a copy of the name-plate that we use.”

Witness then describes the construction of the Pasadena Ice Company's tower as comprising transverse deck-supporting members of wood, extending beyond the vertical posts, which were also of wood and in one continuous piece.

The photographs show that these transverse deck-supporting extensions, which are integral with the deck supports themselves, connected to the tops of the louvers and the louvers in turn are connected at their bottoms to the wood uprights of the tower in such fashion as to take care of the strains and

stresses, giving reinforcement to the tower, all as provided for by the Braun patent.

Concerning this the witness Shattuck says (R. 278):

“It would contribute in the same manner as the construction of the panels and transverse members in the Braun tower.”

Continuing, witness Shattuck says (R. 279-280):

“*By extending the transverse members outwardly beyond the column and the upper part of the louver being hung from that transverse member and extended down at an angle to the next transverse member close to the column, a substantial truss is formed, which tends to make the tower in its entirety more rigid, both laterally and longitudinally.* In a tower similar to one exhibited by Exhibit ‘G,’ the transverse members do not extend beyond the column, and the louvers and supporting members are purely a dead load on the tower, holding the louver there for functioning, the only function being to prevent the wind from carrying the water out.” (Italics ours.)

---

**BRAUN PATENT MARKINGS.**

Braun says (R. 329-330):

“We have at all times put name-plates on our towers, metal name-plates, enamel-covered, bearing the name of the company, the title, ‘Braun Atmospheric Water Cooling Tower’ or ‘Atmospheric Cooling Tower,’ and the dates of all patents which we had on cooling towers at the time when the name-plates were attached to the various towers. Furthermore, the words,

‘Other patents pending,’ and the address of the company.’”

---

**SUBSTANTIAL DIFFERENCES BETWEEN THE SHELL CASE  
AND THE PRESENT CASE.**

“Mr. TOWNSEND: If I may interrupt a minute, this contract that Mr. Shattuck refers to is a contract by the plaintiff Cooling Tower Company and the Pasadena Ice Company, the user. Mr. N. O. Fleming is the representative—I don’t know what they want to call him—of the Cooling Tower Company, and as seen from the correspondence Mr. Lake, the attorney, refers the Fleming matter right to the principals in New York. Now, in the Shell case, the contract was between the Cooling Tower Company, or its predecessor, Mitchell-Tappen Co., and Mr. Braun, and the Braun Company’s contract was with the Shell Company. So the work of the Shell Company was not the work of the plaintiff. It was Mr. Braun’s work. The work with the Pasadena Ice Company, which we complain of, is direct work by contract with the plaintiff. The two cases are not parallel.”

We submit that the trial Court should have found the Braun patent valid and impinged.

---

**DEFENDANT’S COUNTER-CLAIM FOR UNFAIR COMPETITION.**

Paragraph XIV of defendant’s answer and counter-claim briefly states the foundation for the complaint of unfair trade against the plaintiff and is as follows:



## "XIV.

"That the plaintiff has for several years last past made improper and unlawful use of its alleged ownership of various patents on cooling towers, including the patent in suit, and more recently, as defendant is informed and believes, made improper and unlawful use of the fact of bringing this suit against this defendant, all with the unlawful purpose of harassing, annoying, injuring and damaging plaintiff, its agents and customers, in its and their legitimate business aforesaid."

---

## THE EQUITIES OF THE CASE.

This counter-claim, like the others, finds authority in Equity Rule 30.

The answer of the defendant sets up the unfair practices of the plaintiff which have extended over a period of several years and in themselves are sufficient to show that plaintiff has not come into equity with clean hands.

The "Reply of Plaintiff" to defendant's counter-claim admits the wrong-doing charged to it but seeks to excuse its acts by pleading their *legal effect*.

The evidence of Mr. Braun shows the harmful character of these acts, aggravated as they have been by the pernicious activity of Mr. Fleming, the Pacific Coast representative of plaintiff.

PROOFS ON BEHALF OF DEFENDANT'S COUNTER-CLAIM  
AS TO UNFAIR TRADE.

ADMISSIONS OF PLAINTIFF IN ITS REPLY TO  
DEFENDANT'S COUNTER-CLAIM.

Page R. 45:

“ \* \* \* it admits that it has alleged that the alleged towers of the defendant were simulations of the designs and towers of plaintiff and its predecessor and it admits that it has, in the course of business, alleged that defendant was infringing certain patent rights of the plaintiff.”

However, plaintiff fails to state what patents and what claims and just wherein infringement lays in its opinion.

Page R. 45-46:

“ \* \* \* it admits and alleges that various users of cooling towers asserted by the defendant to be its customers, were the customers of the plaintiff” \* \* \*

The Shell Company, mentioned in the Union Oil Company and Standard Oil Company letters of July, 1918, was never, as far as shown or known, a customer of plaintiff.

Page R. 46:

“ \* \* \* it admits that it has threatened to institute suits against users of cooling towers and other devices which infringe the patent rights of the plaintiff” \* \* \*

What “other devices” and what “patent rights,” besides cooling towers, means defendant's business is by no means confined to cooling towers.

Page R. 46:

“ \* \* \* plaintiff admits that on or about the first day of July, 1918, it sent a letter to Union Oil Company, a fragment of which is substantially quoted in said paragraph, but it denies that the said Union Oil Company was a customer of defendant and prays leave to produce the whole of the said letter before this Court,” \* \* \*

This letter is scandalously untrue. The Union Oil Company *was* a customer of defendant, C. F. Braun & Company. The Shell Co. was *not* a customer of *plaintiff*.

Page R. 47-48:

“ \* \* \* defendant alleges that the said *Mitchell-Tappen Company, through the said 'defendant, did, in or about the year 1915, sell two Cooling Towers to the said Shell Company'*” \* \* \* (Italics ours.)

This is a manifestly untrue statement, as seen by the correspondence introduced in evidence in the New York depositions, for it was Braun and not the Mitchell-Tappen Company that *sold* to the Shell Company.

Page R. 48:

“ \* \* \* it *admits* that on or about *July 11, 1918, it wrote a letter to Standard Oil Company, a part of which is quoted substantially in the said paragraph,*” \* \* \* (Italics ours.)

Mr. Braun says he has never been able to do business with the Standard Oil Company since, though

with the Shell Company he has done as much as three hundred thousand (\$300,000) dollars worth of business in a single year.

Page R. 48:

The correspondence passing between Braun's attorney and Mr. Foulds, on behalf of plaintiff, is admitted to be as set out in the answer and justification for the unlawful acts sought by this next admission.

Page R. 48-49:

“ \* \* \* it admits that no suit was brought at that time for the reason that defendant, though requested so to do, refused to give plaintiff information as to its acts and plaintiff was unable to obtain the definite information relating thereto,” \* \* \* (Italics ours.)

This shows the *bad faith* of plaintiff in lacking any foundation in fact for its random accusations against defendant. Such acts are entirely outside the pale of legal authority.

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**ADMISSIONS BY ATTEMPTED DENIALS.**

Page R. 49:

“\* \* \* it denies that it did, in any manner, *unlawfully* harass, annoy or attempt to intimidate any customers or prospective customers of defendant herein,” \* \* \* (Italics ours.)

Page R. 49:

“\* \* \* plaintiff denies that it had knowledge that a *suit, then brought against defendant*, would settle any legal or equitable questions of difference” \* \* \* (Italics ours.)

Page R. 49:

“\* \* \* it believed at that time and still *believes* that the defendant would, by unlawful and dilatory tactics, *attempt to conceal the true facts* and would by reason of the distance separating the parties geographically,” \* \* \* (Italics ours.)

Quite evidently “dilatory” tactics have not been the weapon of the *defense*.

Page R. 50:

“\* \* \* *alleges that it has endeavored to prevent the defendant from unlawfully and wrongfully appropriating the designs and business of the plaintiff*” \* \* \* (Italics ours.)

Page R. 50:

“*all of its statements or representations in the premises have been and are true*” \* \* \* (Italics ours.)

Page R. 50:

“\* \* \* denies that it has, in any manner, *unlawfully* threatened any persons, either customers, prospective customers, or agents of defendant or otherwise, *except such proper warning notices as may have been lawfully sent out in connection with the prosecution of the plaintiff's lawful business*” \* \* \* (Italics ours.)



This is an ineffectual plea in confession and avoidance.

Page R. 50:

“\* \* \* it admits that it has alleged and does now allege that the manufacture or sale of the *pretended cooling towers* of the defendant constituted and do constitute a violation of the patent rights of the plaintiff,” \* \* \* (Italics ours.)

It has failed, however, to state what patents or claims or patent rights were thought to be invaded.

Page R. 51:

“\* \* \* *alleges that it has given the same as full and complete publicity as was lawful and proper in connection with the prosecution of its business*” \* \* \* (Italics ours.)

Page R. 51:

“\* \* \* it denies that it has, in any manner, *unlawfully* sent out letters, communications or notices relative to its rights under said Letters Patent and alleges that all of the letters, communications and notices issued by it, have been lawful and proper” \* \* \* (Italics ours.)

Plaintiff is pleading a legal conclusion. Manifestly, if all letters sent out are like the Union Oil Company letter, then plaintiff stands convicted out of its own mouth.

Page R. 51-52:

“\* \* \* It admits and alleges the fact to be that it verily *believes that this Court will grant injunctions* restraining the unlawful use, manufacture or sale of infringements of its patents,

and it admits that it has so stated to users of cooling towers and devices” \* \* \* (Italics ours.)

This is an assumption, when given publicity, that has warranted the restraining hand of the Court.

Page R. 52:

“ \* \* \* and it denies that it has, in any manner, sought to *improperly or unlawfully intimidate any customers of the defendant*” \* \* \* (Italics ours.)

It thus admits *intimidation* and merely pleads a legal conclusion.

Page R. 52:

“ \* \* \* and it denies that it has made any *unlawful or improper threats*” \* \* \* (Italics ours.)

Page R. 52:

“ \* \* \* or that it has ever threatened or intimidated an intention to prosecute, *wholesale, indiscriminate or improper* litigation in connection with its said patents or otherwise” \* \* \* (Italics ours.)

Page R. 52:

“ \* \* \* it denies that it has, in any manner, *improperly injured or damaged* the defendant’s legitimate business, and denies that it is in any manner, causing defendant any loss of any nature, *except that it is endeavoring to obtain from the defendant the profits unlawfully obtained by it from the manufacture, use and sale of the plaintiff’s devices*” \* \* \* (Italics ours.)

Page R. 52-53:

“ \* \* \* denies that the plaintiff’s acts will constitute or cause any loss or damage to the defendant *improperly*, but alleges the fact to be that the *defendant will be, as a result thereof, merely deprived* of the unlawful, improper and illegal gains made by it from the infringement of the plaintiff’s patent and the infringements of plaintiff’s rights.” \* \* \* (Italics ours.)

Page R. 53:

“ \* \* \* it denies that it has *improperly* advertised or made use of the facts of this suit”  
\* \* \* \* (Italics ours.)

Page R. 53:

“\* \* \* alleges that it has, in good faith, and fairly and with proper and reasonable cause, done all acts in the premises and denies that it has, in any manner, *improperly harassed* or injured or that it is causing or has caused any injury *unlawfully* to the defendant” \* \* \*  
(Italics ours.)

Page R. 54:

“ \* \* \* that it has done any act or thing *tending to destroy* the business of the defendant or its reputation or good will *unlawfully*,”  
\* \* \* \* (Italics ours.)

Page R. 54:

“ \* \* \* alleges that *any injury or damage to the reputation or good will of the defendant will result solely from the defendant’s own unlawful*, malicious and fraudulent acts” \* \* \*  
(Italics ours.)

Page R. 54:

“ \* \* \* it denies that it has, in any manner, attempted to *unlawfully obtain a monopoly to which it is not rightfully and lawfully entitled*” \* \* \* (Italics ours.)

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LEGAL EFFECT OF ADMISSIONS.

The admissions of plaintiff in its reply and its denial of the legal effect of the allegations in the answer operate as an admission of the material facts on which defendant's prayer for relief rests.

Equity Rule 30 provides that the answer must specifically admit, deny or explain the *facts* upon which the plaintiff relies. It is elementary that the admissions of a defendant are binding upon him.

Facts, not conclusions of law, should be denied, since denials of conclusions raise no issues.

“It is not sufficient merely to deny the pleading or a paragraph thereof; the allegations contained in it must be denied.” (31 *Cyc.* 193-194.)

“The answer must meet the substance and not merely the form of the charge; otherwise it will be deemed evasive and for that reason bad. It must be direct and unequivocal, and must clearly identify the allegations sought to be denied. \* \* \* Admissions made in connection with denials limit their effect;” \* \* \* (31 *Cyc.* 194.)

“But merely giving a different version of the matter from that contained in the complaint is not sufficient to put the allegations of the complaint in issue.” (31 *Cyc.* 194-195.)

And then, again:

“The denial must be direct; it is not sufficient to put facts in issue to admit all facts except those specified.” (31 *Cyc.* 198.)

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#### NEGATIVE PREGNANT.

“A negative pregnant is generally held not to raise a material issue, and the consequences are the same as when, for any other reason, an answer admits plaintiff’s allegations without denying or avoiding them.” (31 *Cyc.* 203.)

“*Denials of Allegations with Qualifying Circumstances.* Where a fact is alleged with qualifying or modifying language, and the words of the allegation are literally denied, it is held that the qualifying circumstances alone are denied while the fact itself is admitted. Thus, where the declaration or complaint alleges facts as taking place at a certain time, or in a certain place, or alleges that property or demands are of a certain value or amount, denials of these facts so qualified as to time, place, value, or amount are negatives pregnant, and are deemed to put in issue only the qualifying circumstances. To deny that an act took place at a certain place or time is to admit that it occurred at some different place or time, and to deny that property or demands are of a certain amount or value is to admit them in a different amount or value. The mere addition to the denial of the words ‘as alleged’ has been held to create a negative pregnant.” (31 *Cyc.* 204-205.)

“Matters of aggravation must be denied or they will be deemed admitted.” (31 *Cyc.* 210.)



If it is held that the pleading of defendant is in confession and avoidance, then

“A plea in confession and avoidance or of new matter in the nature of such a plea does not deny the allegations of the declaration, but in legal contemplation confesses them and seeks to avoid them by new affirmative matter.” (31 *Cyc.* 215.)

“AVOIDANCE. A plea in confession and avoidance or, as it is frequently called, a special plea, must set up matter which, if true, affords a full and complete answer to the action. A plea which confesses without avoiding is bad, and if the truth of the plea may be admitted and the action is still maintainable, the plea is bad. The avoidance must be as broad as the confession. The general rule is that affirmative matter must go to avoid the cause of action and not simply to the amount, or in mitigation of damages, although in some jurisdictions it is held that under the codes matter in mitigation may be set up as a partial defense. Matter in avoidance should consist of facts, not legal conclusions, nor matters of evidence.” (31 *Cyc.* 217-218.)

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#### UNFAIR COMPETITION OF PLAINTIFF.

Braun says (R. 313-314):

“MR. TOWNSEND. Q. Have the annoyances that you complain of arising in 1922 abated in any degree since my letter to Mr. Fleming, which is in evidence, written last October, 1922?”

“A. Yes.

“MR. FOULDS. I object to the question on the ground that I understand that is along the same lines counsel said he would not press.

“The COURT. No; he apparently knows about it himself. I would think, Mr. Foulds, that if counsel for the defendant wrote a letter to a man who was selling your towers in this territory and that was followed with a communication that that had been sent on to your company, that that would be sufficient to give rise to a reasonable inference that that communication from Mr. Townsend to Mr. Fleming was communicated to your company.

\* \* \* \* \*

“Mr. TOWNSEND. Q. Has there been a cessation of complaints from customers since that time? A. Yes.”

(R. 315):

“Q. Are you able to state what financial damage, if any, your company has suffered by reason of the admitted acts and representations of plaintiff?”

(Objection; overruled.)

(R. 316):

“A. I can in certain instances estimate the amount of damage sustained by us by reason of the interference with the plaintiff.”

(R. 316-317):

“In the case of the Standard Oil Company, we had enjoyed a substantial business with the Standard Oil Company up to the time we were approached by the Standard Oil Company and shown a copy of a letter received by the Standard Oil Company from the plaintiff in this case; we had had not only cooling tower business but other business. Following that time we have never received any substantial business from the Standard Oil Company either in cooling towers or other apparatus, with the possible

exception of some very small spare parts which they would be obliged to buy from us, being unable to obtain them from others.

“In the case of the Standard Oil Company, I sought their cooling tower business and other business, and have not been successful in securing it. I could estimate the amount of damage by comparison with the volume of business which we have received from, for instance, the Shell Company, a large oil company operating in California, in one year alone, we received from the Shell Company—.”

(R. 317-318):

“The Standard Oil refineries are very difficult of access, and I have no knowledge regarding what they have purchased.”

(R. 320-321):

“Mr. TOWNSEND: Q. Have you any specific instance such as that spoken of where you had solicited the business and were unable to get it on the basis represented?”

“A. I have, in the case of the Union Oil Company of California. The Union Oil Company had been purchasers of our towers, and we quoted the Union Oil Company on another cooling tower, and I was informed by the then superintendent of the gas department of the Union Oil Company—”

(R. 322):

“The COURT: Where does that letter occur in your answer?”

“Mr. TOWNSEND: Paragraph 17, page 13, and the admission appears in paragraph 5 of page 3 of plaintiff’s reply to the counter-claim.

“The COURT: Oh, yes. Is there any question about that, Mr. Foulds?”

“Mr. FOULDS: We admit that letter.”

In answer to plaintiff's objection that defendant's counter-claim required defendant to plead additional jurisdictional facts the Court rightly said (R. 324):

“The COURT. I do not think the amendment is necessary. In paragraph 16 it is alleged that the amount of lost sales is in excess of \$50,000.

“Mr. FOULDS. Yes.”

(R. 325):

“The COURT: No; the trouble with that is, the plaintiff does not rely entirely or alone upon the jurisdiction of this court, but it does allege the diversity of citizenship. It alleges the plaintiff to be a citizen of New York and the defendant a citizen of California. Now, the rule is well settled that where there is a diversity of citizenship alleged in the complaint that it need not be repeated in the cross-complaint where new parties are brought in. The objection is overruled.

\* \* \* \* \*

“I was informed by W. R. Cowan, of the Gas Division, that they had purchased a tower upon which we had bid, from the Cooling Tower Company of New York.”

(R. 326):

“A. Mr. Cowan gave me specific reasons for not giving us this contract.

“Mr. TOWNSEND: Q. Did those reasons pertain to any acts or declarations of the plaintiff?”

“A. They pertained to the acts of N. O. Fleming, the representative of the plaintiff.”  
(Objection.)

\* \* \* \* \*

“The COURT: He has been connected up here by documents, Mr. Foulds, which were followed by actions, so I think that he is sufficiently connected up with the plaintiff.”

(R. 327):

“Mr. TOWNSEND: Q. Are you able to state the value of the tower or towers that you would otherwise reasonably have expected to sell the Union Oil Company?”

(Objection overruled.)

“A. I know of two towers sold by the Cooling Tower Company of New York to the Union Oil Company, which, I believe, had the Union Oil Company ordered our towers, would have amounted to about \$15,000.

“The COURT: For both?”

“A. The two together.”

(R. 327-328):

“The COURT: Yes, but he testified to more than that. He says that the Union Oil Company people told him the reason they did not give him this business was because of the action of Mr. Fleming. The fair inference from that testimony would be that it was along the line of the letter.”

This being a matter dependent on the credibility of the witness and the Court observing the witness and accepting him as honest and fair is unassailable under *Adamson v. Gilliland*, 242 U. S. 350.



MALICIOUS DESTRUCTION OF DEFENDANT'S BUSINESS BY  
THREATS OF SUIT AND INTIMIDATION OF CUSTOMERS.

The owner of a patent may not in the guise of protection of his patent rights destroy the legitimate trade of, nor harass and annoy a competitor, nor terrorize the trade with letters nor with advertisements, and then not promptly vindicate his asserted rights.

As said in *Atlas Underwear Co. v. Cooper Underwear Co.*, 210 Fed. 347 (at 350):

“These cases, while all recognizing the elementary principle that a patentee has a right to protect his interest under a patent by notifying the world in general, or any person in particular, of his rights—cautioning against infringement thereof—recognize and enforce with equal vigor the principle that a patentee cannot, under cover of his patent and his incidental rights, harass and annoy his competitors, seek to destroy their trade, and thereby accomplish results legitimately to be accomplished through the orderly processes of infringement suits. He may not terrorize the trade by calling attention to his rights, and seek to enforce such rights through a succession of threats which he never attempts to effectuate.”

*Electric Renovator Mfg. Co. v. Vacuum Cleaner Co.*, 189 Fed. 754, 757:

“The bill further avers that by reason of the threats and notices the complainant has been damaged in its business and has lost customers.”

“Inasmuch as the allegations of the bill were supported by affidavits, the court upon proof of

notice to the defendants of the application for a preliminary injunction, being satisfied that unfair business methods had been resorted to and were being resorted to by the defendants, \* \* \* issued an order 'restraining the defendants, and each of them, their officers, agents and employes from further in any manner issuing or making any notice, warning, threat or statement charging the complainant, its officers, agents or employes, or any one engaged in selling or using vacuum cleaning apparatus manufactured by complainant, with infringement.' "

*Farquhar Co. v. National Harrow Co.*, 102 Fed. 714, is a case where defendant sent out warning letters for several years, the same as in this case, without bringing suit to establish the validity of its patents. To which the Circuit Court of Appeals, Fifth Circuit, says (at 715):

"Where notices are given or circulars distributed in good faith to warn against infringement, no wrong whatever is committed; but where, as is here averred, they are not made or issued with such intent, but in bad faith, and solely for the purpose of destroying the business of another, a very different case is presented. In such a case property rights are fraudulently assailed, and a court of chancery, whose interposition is invoked for their protection, should not refuse to accord it. *Emack v. Kane* (C. C.) 34 Fed. 46; *Kelley v. Manufacturing Co.* (C. C.) 44 Fed. 23; 10 L. R. A. 686; *Casey v. Union* (C. C.) 45 Fed. 135, 12 L. R. A. 193; *Toledo, A. A. & N. M. Ry. Co. v. Pennsylvania Co.* (C. C.) 54 Fed. 730, 19 L. R. A. 387; *Computing Scale Co. v. National Computing Scale Co.* (C. C.) 79 Fed. 962; *Lewin v. Light Co.* (C. C.) 81 Fed. 904; *Railway Co. v. McConnell* (C. C.) 82 Fed. 65;

Adriance, Platt & Co. v. National Harrow Co. (C. C.) 98 Fed. 118; In re Debs.”

It should be borne in mind that these charges of infringement and threats of suit have been sent out by plaintiff over a period of several years; that the acts of Braun & Co. have been open and in good faith; that defendant has expressly called upon plaintiff to vindicate its alleged rights in the Courts; that plaintiff failed to attempt to enforce its alleged rights until forced to bring this present suit; continuing meanwhile to send threatening letters and to make slanderous statements to the customers of defendant.

As said by Circuit Court of Appeals for the Second Circuit in Adriance, *Platt & Co. v. National Harrow Co.*, 121 Fed. 827 (at 830):

“The question whether the patent owner is acting in good faith in advertising his claims to the manufacturer’s customers by circulars or letters can seldom be determined from the contents of the communication alone, and, like all questions of intent, must generally be determined by the extrinsic facts. It is always easy to frame such circulars in guarded terms, which will not commit the sender to any definite libelous charges, omitting specific statements of fact, and substituting statements of opinion; and when they are sent for an illegitimate purpose they are likely to be so framed. \* \* \*

“As, ordinarily, the patent owner would be prompt and zealous to assert his claims, if he halts and purposely procrastinates, and attempts to effect by threats and manifestoes that which he can compel by the strong hand of the law, a strong inference arises that he has

not any real confidence in his pretensions. This inference becomes irresistible if he refuses to bring suit during a considerable period of time when the alleged infringement is open, notorious, and defiant, and so extensive as to threaten destruction to his alleged exclusive rights. \* \* \* In view of its failure to bring an infringement action, under circumstances which made an action practically compulsory, the defendant cannot shelter itself behind the theory that its circulars and letters were merely legitimate notices of its rights."

Where a manufacturer, as in the case of defendant Braun & Co., manufactures numerous articles other than those involved in this suit, letters of the character described terrorize his general trade and alienate the good will of his customers in all his various lines of business.

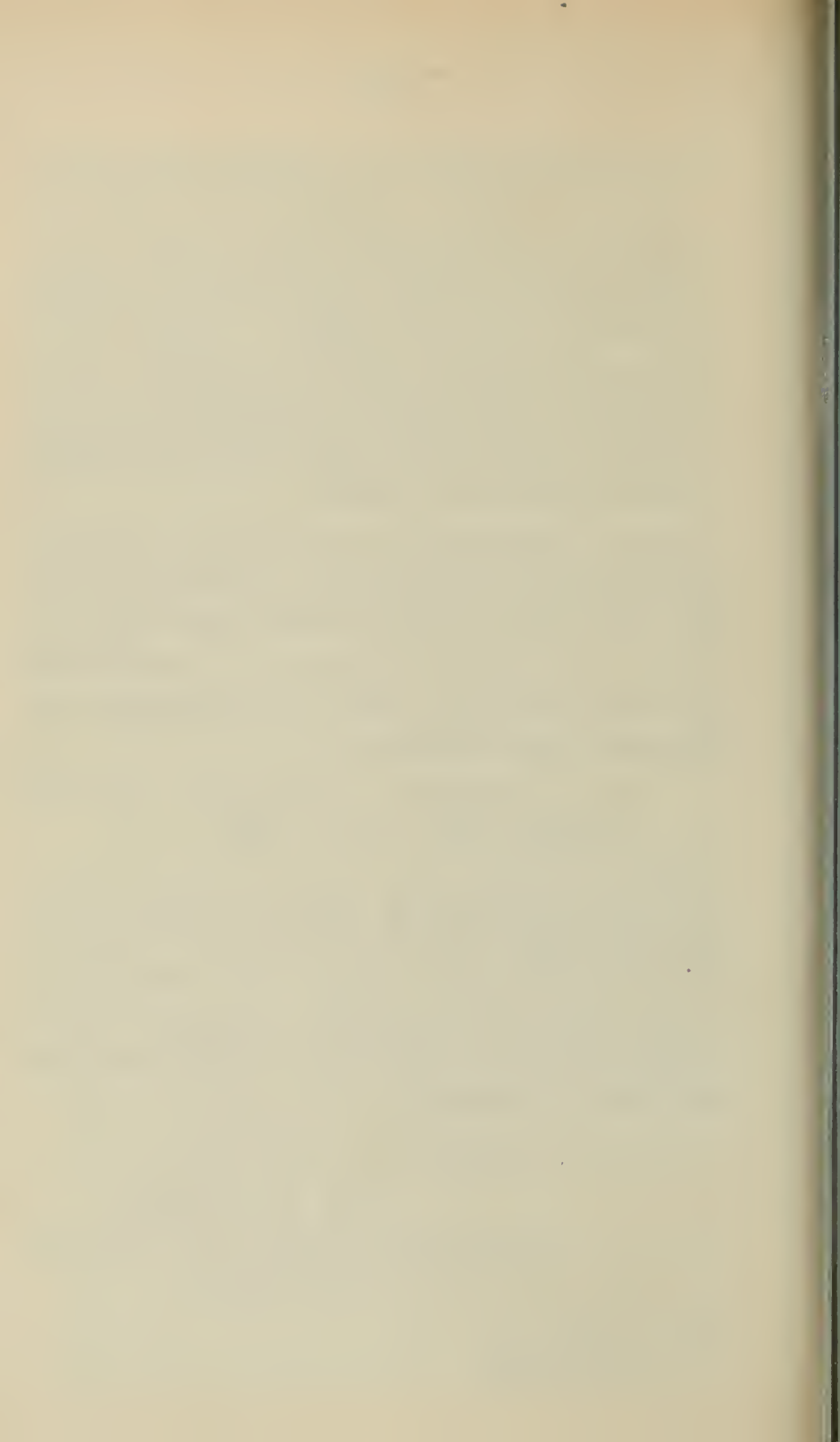
*Freeman-Sweet Co. v. Luminous Unit Co.*,  
253 Fed. 958 (C. C. A. 7th).

We respectfully submit that the portion of the decree appealed from by the defendant should be reversed and the Braun patent held valid and infringed; and that the remainder of the decree should be affirmed and the bill of the plaintiff dismissed with costs to defendant.

Respectfully submitted,

CHAS. E. TOWNSEND,  
*Attorney and Solicitor for Defendant-  
Cross Appellant.*

WM. A. LOFTUS,  
*Of Counsel.*





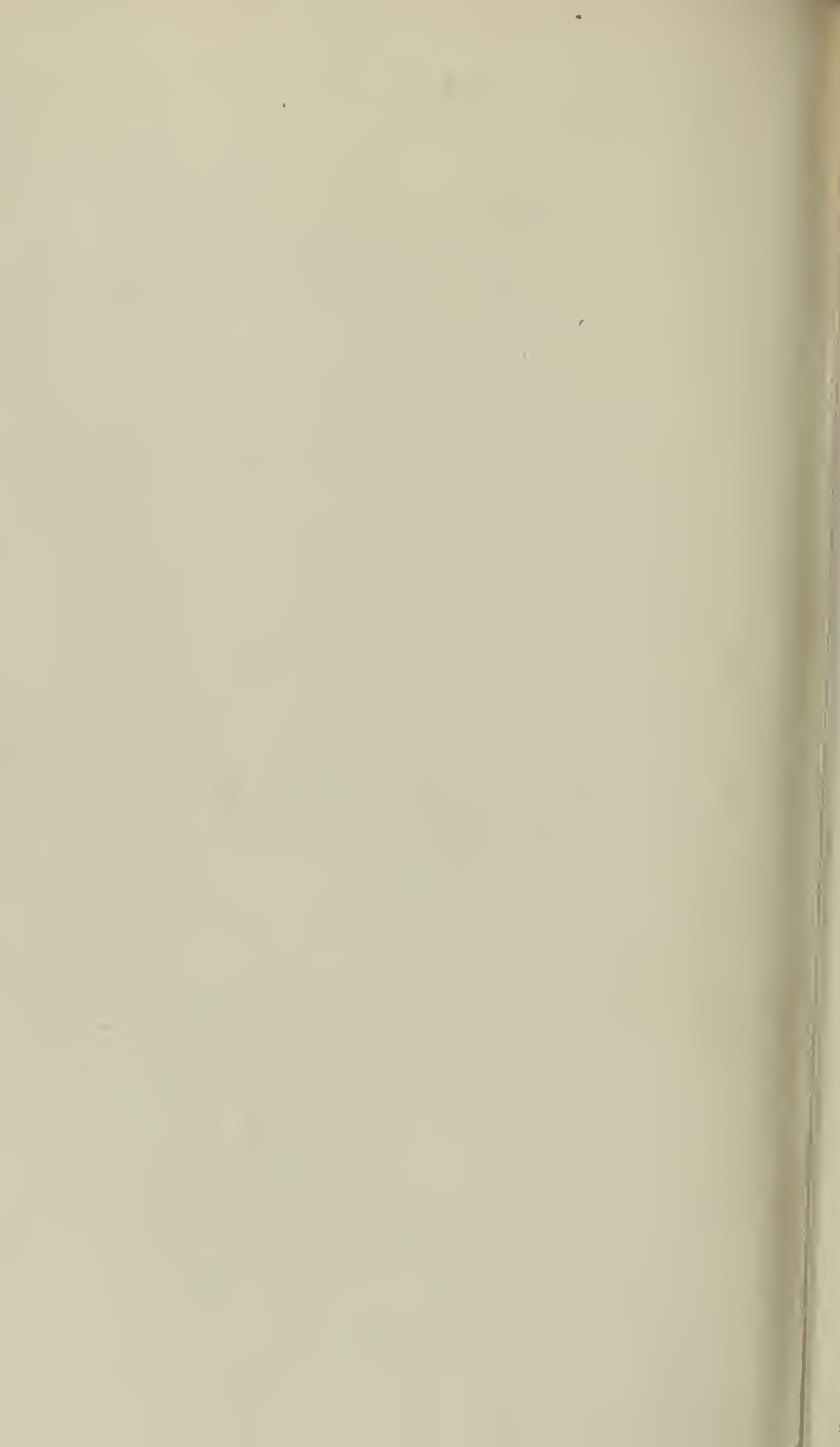
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Circuit Court of Appeals  
For the Ninth Circuit.

UNITED STATES OF AMERICA,  
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vs.  
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Transcript of Record.

Upon Appeal from the United States District Court  
for the District of Montana.

FILED  
APR 1 1 1924  
F. D. MONKTON,  
CLERK



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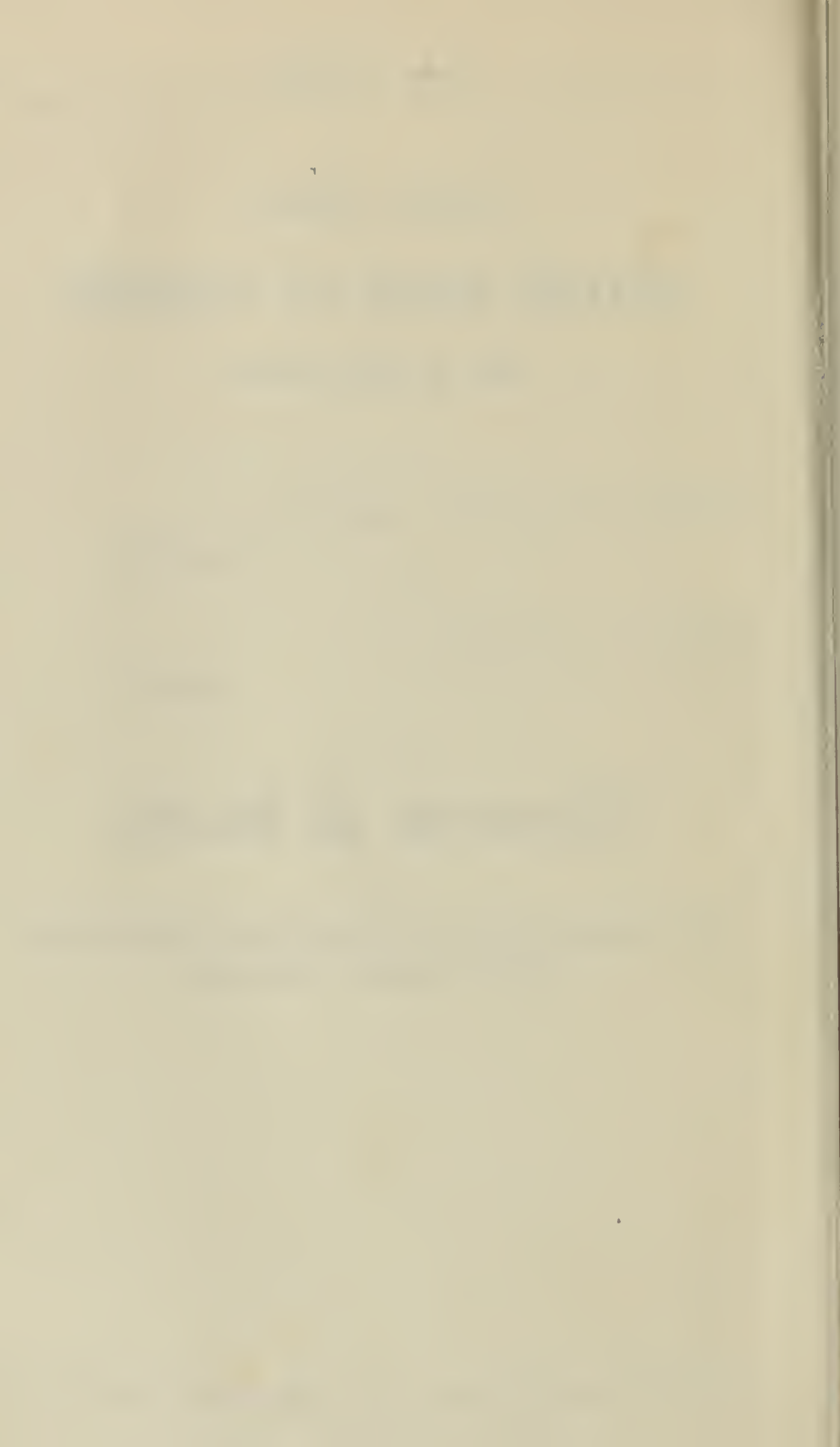
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# INDEX TO THE PRINTED TRANSCRIPT OF RECORD.

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[Clerk Note: When deemed likely to be of an important nature, errors or doubtful matters appearing in the original certified record are printed literally in italic; and, likewise, cancelled matter appearing in the original certified record is printed and cancelled herein accordingly. When possible, an omission from the text is indicated by printing in italic the two words between which the omission seems to occur.]

	Page
Affidavit for Publication of Subpoena and Praecipe . . . . .	10
Affidavit of Mailing . . . . .	13
Affidavit of Publication of Subpoena in Equity . . . . .	15
Assignment of Errors . . . . .	31
Certificate of Clerk U. S. District Court to Transcript of Record . . . . .	48
Citation on Appeal . . . . .	33
Complaint . . . . .	2
Decision . . . . .	19
Decree . . . . .	28
Names and Addresses of Attorneys of Record..	1
Notice of Motion to Approve Statement of Evi- dence on Appeal . . . . .	42
Order Extending Further Time to Prepare Record on Appeal . . . . .	44
Order Extending Time Thirty Days from Feb- ruary 19, 1924, to File Record and Docket Cause . . . . .	50
Order Extending Time Thirty Days to File Record and Docket Cause. . . . .	32



	Index.	Page
Order for Publication .....		12
Order Pro Confesso .....		18
Petition for Appeal .....		29
Praeipice for Transcript of Record.....		45
Statement of the Evidence .....		36
Subpoena .....		7

NAMES AND ADDRESSES OF ATTORNEYS OF  
RECORD.

JOHN L. SLATTERY, Esq., U. S. Attorney, Helena,  
Montana,

RONALD HIGGINS, Esq., Asst. U. S. Attorney,  
Helena, Montana,

W. H. MEIGS, Esq., Asst. U. S. Attorney, Helena,  
Montana,

Attorneys for Plaintiff and Appellant.

[1\*]

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In the District Court of the United States, District  
of Montana.

No. 222—IN EQUITY.

THE UNITED STATES OF AMERICA,  
Plaintiff,

vs.

SIDNEY E. KNIGHT,  
Defendant.

BE IT REMEMBERED, That on June 22, 1922,  
bill of complaint was duly filed herein, being in the  
words and figures following, to wit: [2]

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\*Page-number appearing at foot of page of original certified Tran  
script of Record.

In the District Court of the United States, for the  
District of Montana, Helena Division.

THE UNITED STATES OF AMERICA,  
Plaintiff,

vs.

SIDNEY E. KNIGHT,  
Defendant.

### COMPLAINT.

To the Honorable Judge of the District Court of the  
United States, for the District of Montana:

COMES NOW the United States of America, the  
plaintiff herein, and by and through its attorney,  
John L. Slattery, United States Attorney for the  
District of Montana, brings this, its bill, against  
Sidney E. Knight, a citizen of the United States of  
America, and a resident of Capetown, Union of  
South Africa; and for its cause of action, plaintiff  
states:

#### I.

That on the 5th day of November, 1900, at the  
city of Helena, in the county of Lewis and Clark, in  
the State and District of Montana, and within the  
jurisdiction of this Court, by proceedings duly had  
in the District Court of the First Judicial District  
of the State of Montana, in and for the said County  
of Lewis and Clark, and in a proceeding then and  
there pending in said court, entitled "In the Matter  
of the Application of Sidney E. Knight, an alien,  
to become a citizen of the United States of Amer-  
ica," it was by the said Court duly ordered, adjudged

and decreed that the said Sidney E. Knight, the defendant herein, be, and he was thereby, admitted and declared to be a citizen of the United States [3] of America; and the said Court was then and there competent to exercise, and then and there was exercising, jurisdiction in naturalization proceedings under the laws of the United States of America.

II.

That on said 5th day of November, 1900, by virtue of the said order, judgment and decree of the said Court, the said defendant, who, prior thereto, was a subject of Victoria, Queen of Great Britain and Ireland, became, and ever since has been, a naturalized citizen of the United States of America, and on said date, a certificate of such citizenship was duly issued by the said Court to the defendant herein.

III.

That a copy of a duly certified copy of the said order, judgment and decree, is hereunto annexed, and referred to, and by this reference is made a part of this complaint, as fully, and in all respects as though set out herein at length.

IV.

That within five years after the issuance of said certificate of citizenship to the defendant herein, and on or about the month of September, 1901, the said defendant herein went to a foreign country, to wit, South Africa, and in said month, took and established a permanent residence therein, and ever since said month of September, 1901, the defendant

has resided, and still resides in said foreign country, to wit, South Africa.

## V.

That the said certificate of citizenship was fraudulently and illegally procured by the defendant, in that the defendant, at the time he procured the issuance of the same, did not intend to become a permanent resident of the United States of America, but he intended only to obtain [4] said certificate as *indicia* of such citizenship, in order that he might enjoy the rights and protection of a citizen of the United States of America, and yet within five years thereafter take up and maintain a permanent residence in a foreign country.

WHEREFORE, plaintiff prays that the said certificate of citizenship so issued to the defendant, be set aside and cancelled as fraudulent; that plaintiff recover its costs herein, and for such other and further relief as to the Court may seem just and equitable in the premises.

JOHN L. SLATTERY,

United States Attorney for the District of Montana.

[5]

United States of America,  
State of Montana,—ss.

John L. Slattery, being first duly sworn, on his oath deposes and says:

*That* is the duly appointed, qualified and acting United States Attorney for the District of Montana; that he is the attorney for the plaintiff herein; that he has read the foregoing complaint and knows the



contents thereof, and that the same is true to the best of his knowledge, information and belief.

(Signed) JOHN L. SLATTERY.

Subscribed and sworn to before me this 22d day of June, 1922.

[Seal]

C. R. GARLOW,

Clerk of United States Court, District of Montana.

[6]

In the District Court of the First Judicial District  
of the State of Montana.

Present: Hon. HENRY C. SMITH, Judge.

In Open Court, This 5th Day of November, A. D.  
1900.

In the Matter of the Application of SIDNEY E.  
KNIGHT, an Alien, to Become a Citizen of  
the United States of America.

It appearing to the satisfaction of this Court, by the oaths of Elmer Woodman, and M. M. Potter, citizens of the United States of America, witnesses for that purpose, first duly sworn and examined, that Sidney E. Knight, a native of England, has resided within the limits and under the jurisdiction of the United States five years at least, last past; and within the State of Montana for one year, last past; and that during all of said five years' time he has behaved as a man of good moral character, attached to the principles of the Constitution of the United States, and well disposed to the good order and happiness of the same; and it also appearing to the Court, by competent evidence, that the said

applicant has heretofore, and more than two years since, and in due form of law, declared his intention to become a citizen of the United States; and having now here, before this court, taken an oath that he will support the Constitution of the United States of America, and that he doth absolutely and entirely renounce and adjure all allegiance and fidelity to every foreign Prince, Potentate, State or Sovereignty whatever, and particularly to

VICTORIA, Queen of Great Britain and Ireland,

It is therefore ordered, adjudged and decreed, that the said

SIDNEY E. KNIGHT [7]

be, and he is, hereby admitted and declared to be a citizen of the United States of America.

(Signed) HENRY C. SMITH,

Judge.

Signature: S. E. KNIGHT (Signed).

Office of the Clerk of the District Court of the First Judicial District of the State of Montana, in and for the County of Lewis and Clark,—ss.

I, the undersigned, Clerk of the District Court of the First Judicial District of the State of Montana, in and for the county of Lewis and Clarke, said Court being a court of record having common law jurisdiction, and a clerk and seal, do certify that the above is a true copy of the Act of Naturalization of Sidney E. Knight, as the same appears upon the records of said court now in my office.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of said court, this 2d day of February, in the year of our Lord one thousand

nine hundred and twenty-two, and in the year of  
our Independence the one hundred and forty-sixth.

[Seal]

(Signed) WILL WHALEN,

Clerk.

By (Signed) C. T. COTTINGHAM,

Deputy Clerk.

Filed June 22, 1922. C. R. Garlow, Clerk.

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Thereafter, and on June 22, 1922, a subpoena in  
equity was duly issued herein, being in the words  
and figures following, to wit: [8]

THE UNITED STATES OF AMERICA.

In the District Court of the United States, for the  
District of Montana.

IN EQUITY.

SUBPOENA.

The President of the United States of America,  
GREETING: To Sidney E. Knight, Defendant:

YOU ARE HEREBY COMMANDED, That in  
said District Court of the United States aforesaid,  
at the courtroom in Federal Building at Helena,  
Montana, on the day specified in the memorandum  
below, you answer or otherwise plead to a bill of  
complaint exhibited against you in said court by  
The United States of America, complainant, and to  
do and receive what the said Court shall have con-  
sidered in that behalf:

This is a suit to cancel a certificate of naturaliza-  
tion issued to you on the 5th day of November, 1900,

in the city of Helena, in the county of Lewis and Clark, in the State and District of Montana, by virtue of which certificate of naturalization you then became a citizen of the United States of America.

The bill of complaint alleges that within five years after the issuance of said certificate of naturalization, and on or about the month of September, 1901, you went to a foreign country, to wit, South Africa, and in said month you took up and established a permanent residence therein, and ever [9] since said month of September, 1901, you have resided and still reside in said South Africa; and that you procured the said certificate of naturalization fraudulently and illegally in that at the time you procured the issuance of the said certificate you did not intend to become a permanent resident of the United States of America, but intended only to obtain such certificate as *indicia* of such citizenship in order that you might enjoy the rights and protection of a citizen of the United States of America, and yet within five years after the issuance of such certificate, to take up and maintain a permanent residence in a foreign country.

WITNESS, the Honorable GEO. M. BOURQUIN, Judge of the District Court of the United States for the District of Montana, this 22d day of June, in the year of our Lord one thousand nine hundred and twenty-two and of our Independence the 146th.

[Seal]

C. R. GARLOW,

Clerk.

MEMORANDUM PURSUANT TO RULE 12,  
SUPREME COURT U. S.

YOU ARE HEREBY REQUIRED to file your answer or other defense in the clerk's office of said court on or before the sixtieth day after service, excluding the day thereof; otherwise the bill may be taken *pro confesso*.

[Seal]

C. R. GARLOW,  
Clerk.

JOHN L. SLATTERY,  
United States Attorney,  
Solicitor for Complainant, Helena,  
Montana.

Filed Oct. 21st, 1922. C. R. Garlow, Clerk. [10]

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Thereafter, and on June 22, 1922, affidavit for publication of subpoena and praecipe was duly filed herein, being in the words and figures following, to wit: [11]

In the District Court of the United States, for the  
District of Montana, Helena Division.

UNITED STATES OF AMERICA,

Plaintiff,

vs.

SIDNEY E. KNIGHT,

Defendant.



AFFIDAVIT FOR PUBLICATION OF SUB-  
POENA.

United States of America,  
State of Montana and County of Lewis and  
Clark,—ss.

John L. Slattery, being first duly sworn, on his  
oath deposes and says:

That he is the duly appointed, qualified, and act-  
ing United States Attorney for the District of Mon-  
tana; that he is the attorney for the plaintiff herein;  
that the above-entitled cause is pending in the  
above-entitled court; that affiant is informed, be-  
lieves and therefore alleges the fact to be, that the  
defendant herein, Sidney E. Knight, does not reside  
in the United States of America, but does reside at  
Capetown, in the Union of South Africa, and is  
absent from the United States of America; that a  
cause of action exists in favor of the United States  
of America, and against the defendant in said cause,  
to wit, Sidney E. Knight, who is the defendant with  
respect to whom the service of the subpoena herein  
is to be made; that the said Sidney E. Knight is a  
necessary and proper party to the action, now pend-  
ing in this court, and entitled as aforesaid.

JOHN L. SLATTERY,  
Attorney for the Plaintiff.

Subscribed and sworn to before me this 22d day  
of June, 1922.

[Seal] C. R. GARLOW,  
Clerk of the United States Court, District of Mon-  
tana. [12]

In the District Court of the United States, for the  
District of Montana, Helena Division.

THE UNITED STATES OF AMERICA,  
Plaintiff,

vs.

SIDNEY E. KNIGHT,  
Defendant.

PRAECIPE.

To the Clerk of the Above-entitled Court:

Now, upon the filing of the foregoing affidavit in  
the above-entitled case, the above-named plaintiff  
requires you to cause the service of the subpoena  
herein to be made by publication thereof.

JOHN L. SLATTERY,  
Attorney for the Plaintiff Herein.

Filed June 22, 1922. C. R. Garlow, Clerk.

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Thereafter, and on June 22, 1922, order for publi-  
cation was duly made and filed herein, being in the  
words and figures following, to wit: [13]

In the District Court of the United States, for the  
District of Montana, Helena Division.

THE UNITED STATES OF AMERICA,  
Plaintiff,

vs.

SIDNEY E. KNIGHT,  
Defendant.

## ORDER FOR PUBLICATION.

The plaintiff herein, having filed herein the affidavit of its attorney, John L. Slattery, United States Attorney for the District of Montana, in which affidavit it is stated that the defendant in this case, to wit, Sidney E. Knight, does not reside in the United States of America, but does reside at Capetown, in the Union of South Africa; and that a cause of action exists in favor of the United States of America and against the said Sidney E. Knight, the defendant in respect to whom the service of the subpoena herein is to be made; and that the said Sidney E. Knight is a necessary and proper party to this action; and the plaintiff upon filing such affidavit, having filed a praecipe requiring the clerk of this court to cause the service of the subpoena herein to be made by publication thereof; and the above-entitled court being the court in which this case was commenced, it is hereby ORDERED

That the service of the subpoena herein be made by publication thereof in "Montana Record Herald," the newspaper which is hereby designated as most likely to give notice to the said Sidney E. Knight, who is the person to be served by such subpoena, and that such subpoena be published at least once a week for four successive weeks; the said newspaper being [14] published at Helena, in the State and District of Montana.

Dated June 22, 1922.

C. R. GARLOW,

Clerk of the United States Court, District of Montana.

Filed June 22, 1922. C. R. Garlow, Clerk.

Thereafter, and on October 21, 1922, affidavit of mailing copy of subpoena and bill of complaint was duly filed herein, being in the words and figures following, to wit: [15]

In the District Court of the United States for the  
District of Montana, Helena Division.

EQUITY—No. 222.

UNITED STATES OF AMERICA,

Plaintiff,

vs.

SIDNEY E. KNIGHT,

Defendant.

AFFIDAVIT OF MAILING.

State of Montana,

County of Lewis & Clark,—ss.

C. R. Garlow, being first duly sworn, on his oath deposes and says: That during all the times herein mentioned he was and still is the duly appointed, qualified and acting clerk of the United States District Court for the District of Montana; that the bill of complaint in the above-entitled cause was filed in the office of the clerk of said district court on the 22d day of June, 1922, and that a subpoena, duly entitled in said cause, was on said 22d day of June, after the filing of said bill of complaint, issued by affiant as such clerk, and thereafter, and on said date, affiant, as such clerk, deposited in the United States Postoffice at Helena, Montana,

a copy of the said subpoena and the said bill of complaint contained in an envelope, with the postage thereon fully prepaid, directed to the above-named Sidney E. Knight, the person to be served, at his place of residence, the said envelope being addressed as follows:

“Sidney E. Knight,  
Capetown,  
Union of South Africa.”

That the said envelope containing said copies was duly registered as registered mail, and that upon registering [16] the same and mailing the same as aforesaid, affiant received the annexed registry receipt.

C. R. GARLOW,  
Clerk United States District Court, District of  
Montana.

Subscribed and sworn to before me this 21st day of October, 1922.

[Seal] IRVIN BAER,  
Notary Public for the State of Montana, Residing  
at Helena, Montana.

My commission expires February 1, 1925.

Filed Oct. 21st, 1922. C. R. Garlow, Clerk.

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That on July 19, 1922, affidavit of publication of subpoena in equity was filed, being in the words and figures following, to wit: [17]



AFFIDAVIT OF PUBLICATION OF SUB-  
POENA IN EQUITY.

AFFIDAVIT OF PUBLICATION.

State of Montana,  
County of Lewis and Clark,—ss.

A. Looby, being duly sworn, says he is the fore-  
man of the Montana Record Publishing Company,  
a corporation, the printer of the "Montana Record-  
Herald," a daily newspaper published in the city  
of Helena, county of Lewis and Clark, and State  
of Montana; that the annexed notice is a true copy  
of a notice which was published in said newspaper  
once a week for a period of four weeks commen-  
cing on the 23d day of June, 1922, and ending on  
the 14th day of July, 1922.

A. LOOBY.

Subscribed and sworn to before me this 15th day  
of July, 1922.

[Seal]

C. A. McLAUGHLIN,

Notary Public for the State of Montana, Residing  
at Helena, Montana.

My commission expires January 17, 1924.

IN EQUITY.

THE UNITED STATES OF AMERICA.

In the District Court of the United States for the  
District of Montana.

The President of the United States of America.

Greeting: To Sidney E. Knight, Defendant:

You are hereby commanded, That in said district

court of the United States aforesaid, at the courtroom in federal building at Helena, Mont., on the day specified in the memorandum below, you answer or otherwise plead to a bill of complaint exhibited against you in said court by the United States of America, complainant, and to do and receive what the said court shall have considered in that behalf.

This is a suit to cancel a certificate of naturalization issued to you on the fifth day of November, 1900, in the city of Helena, in the county of Lewis and Clark, in the state and district of Montana, by virtue of which certificate of naturalization you then became a citizen of the United States of America.

The bill of complaint alleges that within five years after the issuance of said certificate of naturalization, and on or about the month of September, 1901, you went to a foreign country, to wit, South Africa, and in said month you took up and established a permanent residence therein, and ever since said month of September, 1901, you have resided and will reside in said South Africa; and that you procured said certificate of naturalization fraudulently and illegally in that at the time you procured the issuance of the said certificate you did not intend to become a permanent resident of the United States of America, but intended only to obtain such certificate as *indicia* of such citizenship in order that you might enjoy the rights and protection of a citizen of the United States of America, and yet within five years after the issuance of such certifi-

cate, to take up and maintain a permanent residence in a foreign country.

Witness, the Hon. GEORGE M. BOURQUIN, Judge of the district court of the United States for the district of Montana, this twenty-second day of June, in the year of our Lord one thousand nine hundred and twenty-two and of our independence the 146th.

[Seal]

C. R. GARLOW,  
Clerk.

MEMORANDUM PURSUANT TO RULE 12,  
SUPREME COURT U. S.

You are hereby required to file your answer or other defense in the clerk's office of said court on or before the sixtieth day after service, excluding the day thereof; otherwise the bill may be taken *pro confesso*.

[Seal]

C. R. GARLOW,  
Clerk.

JOHN L. SLATTERY,  
United States Attorney,  
Solicitor for Complainant, Helena, Mont.  
First publication June 23, 1922.

(Letter-head of Office of United States Attorney—  
District of Montana.)

Clerk U. S. District Court,  
Helena, Montana.

Dear Sir:

RE: U. S. vs. Sidney E. Knight.

Herewith I enclose affidavit of publication of the summons in the above cause, showing that the same was published in the "Montana Record Her-

ald," at the city of Helena, once a week for four successive weeks, commencing on June 23, 1922, and ending on July 14, 1922. You will please file the affidavit in the above cause.

Respectfully yours,

JOHN L. SLATTERY,

United States Attorney.

JLS/IS.

Filed July 19, 1922. C. R. Garlow, Clerk. [18]

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Thereafter, and on June 16, 1923, an order *pro confesso* was duly filed and entered herein, being in the words and figures following, to wit: [19]

In the District Court of the United States, District of Montana, Helena Division.

EQUITY—No. 222.

UNITED STATES OF AMERICA,

Plaintiff,

vs.

SIDNEY E. KNIGHT,

Defendant.

ORDER PRO CONFESSO.

The defendant herein, Sidney E. Knight, having been duly and regularly served with the subpoena in equity herein on the 14th day of July, 1922, and having failed to file an answer or other pleading, or make any appearance of any kind in this cause, within sixty days from and after said 14th day of July, 1922;

NOW, THEREFORE, on motion of John L. Slattery, United States Attorney for the District of Montana, and the attorney for the plaintiff herein,

IT IS HEREBY ORDERED AND DECREED that the bill herein be taken as confessed as to the defendant herein, Sidney E. Knight.

Dated June 16, 1923.

BOURQUIN,  
Judge.

Filed June 16, 1923. C. R. Garlow, Clerk. By H. H. Walker, Deputy. [20]

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Thereafter, and on August 1, 1923, the decision of the Court was duly filed herein, being in the words and figures following, to wit: [21]

In the District Court of the United States, District of Montana, Helena Division.

EQUITY—No. 222.

UNITED STATES OF AMERICA,  
Plaintiff,

vs.

SIDNEY E. KNIGHT,  
Defendant.

DECISION.

This suit is to cancel defendant's certificate of citizenship. Subpoena was served by publication, defendant made default, and final hearing is *ex*



*parte*. Nevertheless, the inescapable responsibility of Courts for their decisions, and their like obligation to righteousness therein, whether cases are *ex parte* or contested, demand careful scrutiny of the integrity of the proceedings and of the sufficiency of the evidence. Hence, brief references to features that otherwise might be deemed fatal defects that escaped the Court. It does not appear the suit is upon any of the affidavits of Sec. 15, Act June 29, 1906, but whether the suit could be maintained in the absence of statute (*Johannessen vs. U. S.* 225 U. S. 240), the affidavit is not jurisdictional.

See *U. S. vs. Leles*, 227 Fed. 190.

The statute is inclusive, not exclusive, and like statutes for actions on complaints by private prosecutors, does not preclude public prosecutors from proceeding of their own motion to enforce the laws.

The complaint alleges defendant procured the certificate in this judicial district in November, 1900, went to South Africa in September, 1901, established permanent residence there, [22] at all times hitherto and now there maintained. No reference is made to defendant's last known residence in this country, and so it does not, as it should, affirmatively appear by direct and positive averment that this court has jurisdiction of subject matter and person of defendant. Altho sec. 15 does not expressly prescribe venue of a suit against a defendant resident abroad at his last known residence in this country, that is its import when as usual is considered its implications, analogies, the substan-

tial nature of the issue, the purpose of venue and notice and the circumstances affecting both. Obviously, Congress did not intend, contrary to principle and precedent, suit and notice elsewhere and haphazard from Alaska to Florida.

It may be the pleader counted on a presumption that defendant's residence in this judicial district, when certificate issued, continued until he went abroad, and it may be that the omission could be remedied by amendment. Upon either supposition the merits may be determined. Preliminary thereto, the query in *U. S. vs. Sharrock*, 276 Fed. 31, whether if a citizen abroad is jurisdiction here to litigate status and whether is due process in service of subpoena by publication, is answered yes. The relations between state and citizen, the latter's obligations to the former, are unchanged by his absence. The state is where he left it. He is bound to hear and to respond to its call to render service of allegiance and to account for default therein at any time in any place. It is not obliged to pursue him with personal notice, but may adopt publication or other convenient method. For the state's purposes the *res* and *situs* of the relation between it and the absent citizen remain in the territory of the state. There is analogy in marriage and divorce. Hence, jurisdiction and due process.

Adverting to the merits, the charge, on information [23] and belief, is that defendant fraudulently procured the certificate in that he then "did not intend to become a permanent resident of the

United States" (the statute is "permanent citizen," perhaps equivalent terms. See *Luria vs. U. S.*, 231 U. S. 9). The only evidence is a copy of the certificate of citizenship, and a narrative by plaintiff's counsel at Cape Town, certified by its Department of State and presented by the district attorney, as follows:

"I, Charles J. Pisar, Vice Consul of the United States of America, at Cape Town, Union of South Africa, hereby certify that I am personally acquainted with Sidney Ernest Knight, who resides at Cape Town; that he stated under oath on May 26, 1917, when he registered as an American citizen at the American Consulate General at Cape Town, that he was born in London on September 24, 1875; that he came to the United States in May, 1890; that he was a naturalized American citizen, submitted his naturalization certificate, issued by the First Judicial Court at Helena, Montana, on November 5, 1900, in proof thereof; that he came to Cape Town on September 13, 1901, for the purpose of representing the Mercantile Agency, R. G. Dun & Company, of 290 Broadway, New York City, which firm he has constantly represented in South Africa since, and that he intended to return to the United States for permanent residence whenever his employers so desired.

I further certify that on October 25, 1920, Mr. Knight appeared at the American Consulate General at Cape Town, bearing passport No. 32218/11 issued to him by the Government of the Union of South Africa on October 19, 1920, with a request

for a visa thereto to enable him to proceed to the United States in connection with the business of the firm he represents, and that such a visa was granted by Vice Consul Charles W. Allen, to whom Mr. Knight was not personally known to be a citizen of the United States.

I further certify that answering an invitation to call at the American Consulate General, Mr. Knight appeared on October 26, 1921, and upon being questioned concerning his citizenship, stated to me that he applied for a British passport in October, 1920, for specific reasons which he declined to divulge, that when he applied for said passport he was not required to take an oath of allegiance to the British Crown, or to swear to the declaration made in applying for the passport; that he admitted that he has now lived for twenty years in South Africa, returning to the United States but once during this period, and that he did not know when he would return for permanent residence; that he had voted on several occasions at elections in South Africa, and that he has acquired interest in local community affairs and intended to [24] take an active part therein during his residence here.

I further certify that Mr. Knight left the United States within less than one year after completing his naturalization as a citizen of the United States of America, and while he has been representing American interests in South Africa, he has failed to adhere to his oath of allegiance as an American citizen, and that his naturalization as an American



citizen was fraudulently obtained, and should be revoked.

I further certify that Mr. Knight refused to surrender his Certificate of Naturalization.

Given under my hand and official seal at city of Cape Town, Union of South Africa, this 29th day of October, A. D. 1921."

[Seal]

CHARLES J. PISAR,

Vice-Consul of the United States of America.

Section 15 provides that if any naturalized citizen within five years after issuance of certificate, takes "permanent residence" abroad, "it shall be considered *prima facie* evidence of a lack of intention on the part of such alien to become a permanent citizen of the United States at the time of filing his application for citizenship, and, in the absence of countervailing evidence, it shall be sufficient in the proper proceeding to authorize the cancellation of his certificate of citizenship as fraudulent"; that consuls "shall from time to time, through the Department of State, furnish the Department of Justice with the names of those within their respective jurisdictions who have such certificates of citizenship and who have taken permanent residence" therein, "and such statements, duly certified, shall be admissible in evidence in all courts in proceedings to cancel certificates of citizenship."

The statute (1) creates a rebuttal presumption (perhaps) of past intent by proof of subsequent acts, and (2) imposes a duty on consuls and gives evidentiary competency to some of their *ex parte*



and extrajudicial statements. It invades the law against hearsay evidence, always a dangerous innovation, and is not to be extended by implication.

At the same time to serve its purpose of information [25] and to facilitate proof, the statute must be reasonably construed. The competency it creates can extend no farther than the duty, viz., to furnish names of naturalized citizens of permanent residence, in consuls' respective jurisdictions. Not everything the consul incorporates in his narrative will be competent and admissible, but only that which is relevant, material and competent, were the consul testifying on oath to the facts it is his statutory duty to report and none other. Accordingly, the narrative aforesaid is evidence only as follows: that May 26, 1917, at the consulate in Cape Town, defendant registered as an American citizen and on oath declared as follows; his name and time and place of naturalization; that he arrived in Cape Town on September 13, 1901, in business representation of a noted New York concern, had since continuously represented it in South Africa, and intended to return to the United States for permanent residence whenever his employer so desired; that Oct. 26, 1922, defendant, at said consulate, admitted that in October, 1920, he had applied for a British passport, had lived twenty years in South Africa, in that time had returned to the United States but once, did not know when he would return for permanent residence, had voted in South Africa, and was interested in community affairs and intended to be active therein; and that defend-

ant refused to surrender his certificate of citizenship. Other of the consul's narrative, hearsay, conclusions, advice, etc., is without evidentiary competency and value save to the extent it discloses the overzeal if not irritation and prejudice of an affronted man, and inspires more than usual caution in appraising trustworthiness in reporting more or less remote conversations with an accused and admissions imputed to him. If, however, the consul's report of defendant's declarations and [26] admissions be taken at face value, it fails to prove the vital fact that alone may invoke the presumption of defendant's fraud in procuring the certificate. Even if the declarations and admissions of past acts but of only present intent, suffice to prove that then presently defendant was a permanent resident in South Africa, they fall short of proving that such permanent residence began twelve—seventeen years theretofore and within five years after certificate issued,—the vital fact as aforesaid. The mere fact that eleven months after certificate issued, the citizen in his employer's business goes abroad, in it is detained twelve years, then avows his intent to return to the United States for permanent residence when his employer desired, and refuses to surrender his certificate of citizenship to one who officiously demands it, are not proof that the citizen by act and intent abandoned his domicile in the United States and acquired a domicile abroad, all within five years after certificate issued. They are reasonably consistent with domicile in the United States until the time of the declaration if

not always, and by reason of them is no backward presumption otherwise. A change of abode with present intent to return to the former abode upon the contemplated happening of an event, in the indefinite future, as business despatched, health recovered, employment ended, employer's recall, is not a change of residence or domicile. If, however, a person removes to another place with present intent to abide there indefinitely and not merely until contemplated happening of a contingency as aforesaid, he abandons his old residence or domicile in the place from which he removed, and acquires new residence or domicile in the place to which he removed, notwithstanding he may entertain a vague, floating intent or hope to some time return to the former place. The distinction and difference are that in legal contemplation [27] the first case is a present intent to return and independent of future determinations; whereas, the second case is a mere present expectation or hope to return, and wholly dependent upon future state of mind. The latter, unlike the former, does not rise to the dignity of that "present intent" which is a vital element of residence or domicile.

See *Williamson vs. Osenton*, 232 U. S. 619.

*Gilbert vs. Davis*, 235 U. S. 561.

It must be borne in mind these proceedings are to annul a solemn judicial grant of and by the United States to defendant, and "nothing will warrant cancellation of his grant of citizenship but clear, unequivocal and convincing evidence, that in quantity and quality inspires confidence and

produces conviction of the truth of the charge, virtually beyond reasonable doubt.”

U. S. vs. Sharrock, 276 Fed. 32.

The evidence in this case is short of that high character. Like comment applies to the admissions of voting and community interest. All may have been presently.

Taken as a whole, the evidence fails to persuade the conscience of the chancellor that justice would be done by a decree against defendant, and so the decree is for him.

Aug. 1, 1923.

BOURQUIN, J.

Filed August 1, 1923. C. R. Garlow, Clerk.

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Thereafter, and on August 11, 1923, decree was duly filed and entered herein, being in the words and figures following, to wit: [28]

In the District Court of the United States, in and  
for the District of Montana.

No. 222.

UNITED STATES

vs.

SIDNEY E. KNIGHT.

DECREE.

This cause came on to be heard at this term, and was submitted without argument; and thereupon, upon consideration thereof, it was ordered, adjudged and decreed as follows: That the Court finds the

issues in favor of defendant and against plaintiff, and thereupon concludes that plaintiff is not entitled to recover and the proceedings should be and are dismissed.

August 11, 1923.

BOURQUIN,  
Judge.

Entered and filed Aug. 11, 1923. C. R. Garlow,  
Clerk.

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Thereafter, and on December 7, 1923, petition for appeal and order allowing same was duly filed herein, being in words and figures following, to wit:  
[29]

In the District Court of the United States, District  
of Montana, Helena Division.

EQUITY—No. 222.

THE UNITED STATES OF AMERICA,  
Plaintiff,

vs.

SIDNEY E. KNIGHT,  
Defendant.

PETITION FOR APPEAL.

To the Honorable GEORGE M. BOURQUIN, Judge  
of the United States District Court Aforesaid:

The United States of America, plaintiff above named, feeling itself aggrieved by the decree made and entered in this cause on the 11th day of August, A. D. 1923, does hereby appeal from said decree to the United States Circuit Court of Appeals for the



Ninth Circuit, for the reasons specified in the assignment of error, which is filed herewith, and prays that its appeal be allowed and that a transcript of the record, proceedings and papers upon which said decree was based, duly authenticated, may be sent to the United States Circuit Court of Appeals for the Ninth Circuit, sitting at San Francisco, California, and for such other and further order as to the Court may seem just and meet.

(Signed) JOHN L. SLATTERY,  
United States Attorney, District of Montana,  
Attorney for Plaintiff. [30]

The foregoing petition is hereby granted and appeal allowed to the United States of America.

Done in open court at Great Falls, Montana, this 7 day of December, 1923.

(Signed) BOURQUIN,  
Judge.

Filed Dec. 7, 1923. C. R. Garlow, Clerk. By  
H. H. Walker, Deputy.

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Thereafter, and on December 7, 1923, assignment of errors was duly filed herein, being in the words and figures following, to wit: [31]

In the District Court of the United States, District  
of Montana, Helena Division.

EQUITY—No. 222.

THE UNITED STATES OF AMERICA,  
Plaintiff,

vs.

SIDNEY E. KNIGHT,  
Defendant.

ASSIGNMENT OF ERRORS.

Now, and on this 7th day of December, 1923, comes the United States of America, the plaintiff in this cause, by John L. Slattery, United States Attorney for the District of Montana, and in connection with the petition of plaintiff for an appeal herein, hereby makes the following assignment of errors, which plaintiff avers occurred in this cause:

I.

The Court erred in finding the evidence taken in said cause, at the hearing thereof, was insufficient to sustain the allegations of the bill of complaint herein.

II.

The Court erred in ordering a decree herein in favor of the defendant and against the plaintiff, dismissing plaintiff's bill of complaint.

III.

The Court erred in entering a decree herein in favor of defendant and against the plaintiff, dismissing plaintiff's bill of complaint. [32]

WHEREFORE, the plaintiff prays that the said decree be reversed and the United States Circuit Court of Appeals for the Ninth Circuit direct a proper decree in favor of the plaintiff and against the defendant in accordance with the prayer of plaintiff's said bill of complaint and the record in this cause.

(Signed) JOHN L. SLATTERY,  
United States Attorney, District of Montana.

Filed Dec. 7, 1923. C. R. Garlow, Clerk. By  
H. H. Walker, Deputy.

---

Thereafter, and on December 7, 1923, order extending time to prepare record on appeal was duly filed herein, being in the words and figures following, to wit: [33]

In the District Court of the United States, District  
of Montana, Helena Division.

EQUITY—No. 222.

THE UNITED STATES OF AMERICA,  
Plaintiff,

vs.

SIDNEY E. KNIGHT,  
Defendant.

ORDER EXTENDING TIME THIRTY DAYS TO  
FILE RECORD AND DOCKET CAUSE.

Upon good cause shown, it is hereby ordered that plaintiff and appellant in the above-entitled cause, may have thirty days in addition to the time allowed by the rules of this court within which to have prepared and certified up to the Circuit Court of Appeals for the Ninth Circuit, the record on appeal herein.

Dated this 7 day of December, A. D. 1923.

(Signed) BOURQUIN,  
Judge.

Filed Dec. 7, 1923. C. R. Garlow, Clerk. By  
H. H. Walker, Deputy.

Thereafter, and on December 19, 1923, citation on appeal was duly issued and filed herein, which original citation is hereto annexed, and is in the words and figures following, to wit: [34]

In the District Court of the United States, District of Montana, Helena Division.

EQUITY—No. 222.

THE UNITED STATES OF AMERICA,  
Plaintiff,

vs.

SIDNEY E. KNIGHT,  
Defendant.

CITATION ON APPEAL.

To Sidney E. Knight, Defendant and Appellee,  
GREETING:

You are hereby cited and admonished to be and appear before the United States Circuit Court of Appeals for the Ninth Circuit, sitting at the city of San Francisco, State of California, within thirty days from the date hereof pursuant to an appeal filed in the office of the Clerk of the District Court of the United States for the District of Montana, wherein the United States of America is appellant and Sidney E. Knight is appellee, to show cause, if any there be, why the decree in said appeal mentioned should not be corrected and reversed and speedy justice should not be done to the parties in that behalf.

WITNESS, the Honorable GEORGE M. BOURQUIN, Judge of the United States District Court, District of Montana, this 19 day of December, 1923.

BOURQUIN,  
Judge United States District Court, District of  
Montana. [35]

United States of America,  
District of Montana,—ss.

W. H. Meigs, being duly sworn, deposes and says:

That he is over the age of twenty-two years and a duly appointed, qualified and acting Assistant United States Attorney for the District of Montana; that on the 19th day of December, 1923, he served the foregoing citation on appeal by leaving a copy thereof for the said Sidney E. Knight with C. R. Garlow, Clerk of the United States District Court for the District of Montana, at his office in the Federal Building, in the city of Great Falls, Montana, and by depositing an additional copy thereof, securely sealed, in an envelope, in the United States Postoffice at Great Falls, Montana, with full pre-paid registered postage thereon, the said envelope being addressed as follows:

Mr. Sidney E. Knight,

Cape Town,

Union of South Africa,

the same being the last known address of the said Sidney E. Knight, defendant and appellee herein.

This in compliance with paragraph 4 of Rule 33, Rules of Practice of the United States Circuit Court



of Appeals for the Ninth Circuit, in and for the District of Montana.

W. H. MEIGS.

Subscribed and sworn to before me this 19th day of December, 1923.

[Seal]

C. R. GARLOW,

Clerk United States District Court, District of Montana. [36]

Stamp of dispatching office.  
[Great Falls, Mont.  
Registered Dec. 19, 1923.]

ADMINISTRATION OF UNITED STATES OF AMERICA.  
RETURN RECEIPT

for a letter with declared value of— }  
for a registered article—letter (1)— } entered at the office  
Great Falls, Mont., Dec. 19, 1923. No. 14602 (2)  
mailed by M—U. S. Dist. Atty. Helena, Mont.  
and addressed to M—Sidney E. Knight (at).....  
complete address—Cape Town, So. Africa

The undersigned declares that a { letter with declared value } to the above  
{ registered article }  
address, and originating at .....  
has been duly delivered the ...., 19

Stamp of delivering office.  
[Cape Town, So. Africa  
29 Jan. 24]

Signature (3) of the addressee:  
Signature (3) of the postal official of the office of delivery:

Mua Lenen.

(1) Nature of the article (letter, sample, print, etc.).

(2) Office of origin; date of mailing at that office; registration No. of that office.

(3) NOTE.—This receipt must be signed by the addressee or, if the regulations of the country of destination permit it, by the postal official of the office of delivery, then placed in an envelope and sent by the first mail to the office of origin of the article to which it relates.

[Endorsed]: No. 222. In the District Court of the United States, District of Montana, Helena Division. The United States of America, Plaintiff, vs. Sidney E. Knight, Defendant. Citation on Appeal. Filed Dec. 19, 1923. C. R. Garlow, Clerk.  
[37]

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Thereafter, and on December 19, 1923, statement of the evidence was received in the clerk's office, and on March 12, 1924, was approved and filed, being in the words and figures following, to wit:  
[38]

In the District Court of the United States, District of Montana, Helena Division.

EQUITY—No. 222.

THE UNITED STATES OF AMERICA,  
Plaintiff,

vs.

SIDNEY E. KNIGHT,  
Defendant.

STATEMENT OF THE EVIDENCE.

BE IT REMEMBERED, that the above-entitled cause came regularly on for trial before the above-entitled court on the 18th day of July, 1923, the plaintiff being represented by John L. Slattery, Esq., United States Attorney for the District of Montana, the defendant being in default and not represented.

And thereupon the following proceedings were had and the following evidence was duly introduced and submitted in said cause:

CERTIFIED COPY OF CERTIFICATE OF  
CHARLES J. PISAR, AMERICAN VICE-  
CONSUL AT CAPE TOWN, SOUTH AFRICA.

No. 10,196.

UNITED STATES OF AMERICA.

DEPARTMENT OF STATE.

To All to Whom These Presents Shall Come,  
GREETING:

I certify that the attached certificate regarding the acquisition of a permanent residence abroad by Mr. Sidney Ernest Knight within five years after his naturalization as a citizen of the United States was executed by the American Vice-Consul at Cape Town, South Africa, pursuant to Section 15 of the Act of June 29, 1906. [39]

In Testimony Whereof I, Charles E. Hughes, Secretary of State, have hereunto caused the Seal of the Department of State to be affixed and my name subscribed by the Chief Clerk of the said Department, at the City of Washington, this 22d day of December, 1921.

(Signed) CHARLES E. HUGHES,

Secretary of State.

[Seal] By (Signed) BEN G. DAVIS,

Chief Clerk.

I, Charles J. Pisar, Vice-consul of the United States of America, at Cape Town, Union of South Africa, hereby certify that I am personally acquainted with Sidney Ernest Knight, who resides at Cape Town; that he stated under oath on May 26, 1917, when he registered as an American citizen at

the American Consulate General at Cape Town, that he was born in London on September 24, 1875; that he came to the United States in May, 1890; that he was a naturalized American citizen, submitting his naturalization certificate, issued by the First Judicial Court at Helena, Montana, on November 5, 1900, in proof thereof; that he came to Cape Town on September 13, 1901, for the purpose of representing the Mercantile Agency, R. G. Dun & Company, of 290 Broadway, New York City, which firm he has constantly represented in South Africa since, and that he intended to return to the United States for permanent residence whenever his employers so desired.

I further certify that on October 25, 1920, Mr. Knight appeared at the American Consulate General at Cape Town, bearing passport No. 32,218/11 issued to him by the [40] Government of the Union of South Africa on October 19, 1920, with a request for a visa thereto to enable him to proceed to the United States in connection with the business of the firm he represents, and that such a visa was granted him by Vice-Consul Charles W. Allen, to whom Mr. Knight was not personally known to be a citizen of the United States.

I further certify that answering an invitation to call at the American Consulate General, Mr. Knight appeared on October 26, 1921, and upon being questioned concerning his citizenship, stated to me that he applied for a British passport in October, 1920, for specific reasons which he declined to divulge; that when he applied for said passport he was not

required to take an oath of allegiance to the British Crown, or to swear to the declaration made in applying for the passport; that he admitted that he has now lived for twenty years in South Africa, returning to the United States but once during this period, and that he did not know when he would return for permanent residence; that he had voted on several occasions at elections in South Africa, and that he has acquired interest in local community affairs, and intended to take an active part therein during his residence here.

I further certify that Mr. Knight left the United States within less than one year after completing his naturalization as a citizen of the United States of America, and while he has been representing American interest in South Africa, he has failed to adhere to his oath of allegiance as an American citizen, and that his naturalization as an American citizen was fraudulently obtained, and should be revoked. [41]

I further certify that Mr. Knight refused to surrender his Certificate of Naturalization.

Given under my hand and official seal at City of Cape Town, Union of South Africa, this 29th day of October, A. D. 1921.

[Seal] (Signed) CHARLES J. PISAR,  
Vice-Consul of the United States of America.

WHEREFORE, plaintiff prays that the above and foregoing certificate and testimony taken in said cause, be settled, approved and allowed by the above-entitled court as a true, full and complete statement of the evidence relative and material to



the issues in the above-entitled cause for use on the appeal taken to the Circuit Court of Appeals for the Ninth Circuit, sitting at San Francisco, California.

JOHN L. SLATTERY,

United States Attorney for the District of Montana,  
Attorney for Plaintiff.

The above and foregoing is hereby approved as a true and complete statement of the evidence in the above-entitled cause.

Dated March 12, 1924.

CHARLES N. PRAY,

Judge. [42]

United States of America,  
District of Montana,—ss.

W. H. Meigs, being duly sworn, deposes and says:

That he is over the age of twenty-one years and a duly appointed, qualified and acting Assistant United States Attorney for the District of Montana; that on the 19th day of December, 1923, he served the foregoing statement of evidence on appeal by leaving a copy thereof for the said Sidney E. Knight with C. R. Garlow, clerk of the United States District Court for the District of Montana, at his office in the Federal Building, in the city of Great Falls, Montana, and by depositing an additional copy thereof, securely sealed, in an envelope, in the United States Postoffice at Great Falls, Montana,

with full prepaid registered postage thereon, the said envelope being addressed as follows:

Mr. Sidney E. Knight,

Cape Town,

Union of South Africa,

the same being the last-known address of the said Sidney E. Knight, defendant and appellee herein.

This in compliance with Paragraph 4 of Rule 33, Rules of Practice of the United States Circuit Court of Appeals for the Ninth Circuit, in and for the District of Montana.

W. H. MEIGS.

Subscribed and sworn to before me this 19th day of December, 1923.

[Seal]

C. R. GARLOW,

Clerk United States District Court, District of Montana.

Received Dec. 19, 1923. C. R. Garlow, Clerk.

Filed March 12, 1924. C. R. Garlow, Clerk. [43]

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Thereafter, and on December 19, 1923, notice of motion to approve statement of evidence was filed herein, being in the words and figures following, to wit: [44]

In the District Court of the United States, District  
of Montana, Helena Division.

EQUITY—No. 222.

THE UNITED STATES OF AMERICA,  
Plaintiff,

vs.

SIDNEY E. KNIGHT,  
Defendant.

NOTICE OF MOTION TO APPROVE STATE-  
MENT OF EVIDENCE ON APPEAL.

To Sidney E. Knight, Defendant in the Above-en-  
titled Action:

You are hereby notified that the undersigned at-  
torney for the plaintiff and appellant herein has  
this day lodged with the clerk of the aforesaid  
court, plaintiff's statement of the evidence on ap-  
peal herein, and that at Butte, in the State and Dis-  
trict of Montana, on the 25th day of February, 1924,  
at the hour of 9:30 A. M. of said day, or as soon there-  
after as counsel can be heard, the undersigned will  
ask the Court or Judge to approve the aforesaid  
statement of the evidence on appeal herein.

JOHN L. SLATTERY,

United States Attorney, District of Montana,  
Attorney for Plaintiff. [45]

United States of America,  
District of Montana,—ss.

W. H. Meigs, being duly sworn, deposes and says:  
That he is over the age of twenty-one years and a

duly appointed, qualified and acting Assistant United States Attorney for the District of Montana; that on the 19th day of December, 1923, he served the foregoing notice of motion to approve statement of evidence on appeal by leaving a copy thereof for the said Sidney E. Knight with C. R. Garlow, clerk of the United States District Court for the District of Montana, at his office in the Federal Building, in the city of Great Falls, Montana, and by depositing an additional copy thereof, securely sealed, in an envelope, in the United States Post Office at Great Falls, Montana, with full pre-paid registered postage thereon, the said envelope being addressed as follows:

Mr. Sidney E. Knight,  
Cape Town,

Union of South Africa,  
the same being the last known address of the said Sidney E. Knight, defendant and appellee herein.

This in compliance with paragraph 4 of Rule 33, Rules of Practice of the United States Circuit Court of Appeals for the Ninth Circuit, in and for the District of Montana.

(Signed) W. H. MEIGS.

Subscribed and sworn to before me this 19th day of December, 1923.

[Seal] C. R. GARLOW,  
Clerk United States District Court, District of  
Montana.

Filed Dec. 19, 1923. C. R. Garlow, Clerk. [46]

Thereafter, and on January 29, 1924, order extending time to prepare record an appeal was duly made and entered herein, being in the words and figures following, to wit: [47]

In the United States Circuit Court of Appeals for  
the Ninth Circuit.

UNITED STATES OF AMERICA,

Appellant,

vs.

SIDNEY E. KNIGHT,

Appellee.

ORDER EXTENDING FURTHER TIME TO  
PREPARE RECORD ON APPEAL.

IN THIS CAUSE and on the 7th day of December, 1923, an order was duly made and given granting unto the plaintiff and appellant in the above-entitled cause thirty days in addition to the time allowed by the rules of this Court within which to have prepared and certified to the Circuit Court of Appeals for the Ninth Circuit, the record on appeal herein, which said additional time will expire on February 19, 1924; and it further appearing to the Court that the appellee resides in Cape Town, Union of South Africa, and that the notice of motion to approve statement of evidence on appeal will expire on February 25, 1924;

NOW, THEREFORE, upon good cause shown, it is hereby ordered that the said plaintiff and appellant may have thirty days additional time



from and after February 19, 1924, in which to have prepared and certified up to the United States Circuit Court of Appeals for the Ninth Circuit, the record on appeal herein.

Dated this 29th day of January, 1924.

BOURQUIN,  
Judge. [48]

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That on December 19, 1923, a praecipe for transcript of record was duly filed herein, being in the words and figures following, to wit: [49]

In the District Court of the United States, District of Montana, Helena Division.

EQUITY—No. 222.

THE UNITED STATES OF AMERICA,  
Plaintiff,

vs.

SIDNEY E. KNIGHT,  
Defendant.

PRAECIPE FOR TRANSCRIPT OF RECORD.

To the Clerk of the Above-entitled Court:

You are hereby requested to make a transcript of record to be filed in the United States Circuit Court of Appeals for the Ninth Circuit, sitting at San Francisco, California, pursuant to the appeal allowed in the above-entitled cause, and to incorporate in such transcript of record the following papers, to wit:

1. The bill of complaint.
2. Subpoena in equity.
3. Affidavit for order directing service by publication.
4. Order for publication.
5. Affidavit of mailing copy of subpoena together with copy of bill of complaint.
6. Affidavit of publication.
7. Order *pro confesso*.
8. Opinion of the Court rendered and filed August 1, 1923.
9. Decree made and entered August 11, 1923.
10. Copy of petition for appeal and allowance thereof by the Court.
11. Assignment of errors, accompanying appeal.  
[50]
12. Order extending time for completing and transmitting the record on appeal herein to the United States Circuit Court of Appeals for the Ninth Circuit.
13. Citation on appeal.
14. Statement of evidence on appeal.
15. Notice of motion to approve statement of evidence on appeal.
16. Copy of this praecipe.
17. Any other file, paper or document required to be incorporated in a transcript of record herein under the practice and rules of the said United States Circuit Court of Appeals for the Ninth Circuit.

Dated this 19th day of December, 1923.

(Signed) JOHN L. SLATTERY,  
United States Attorney, District of Montana,  
Attorney for Plaintiff. [51]

United States of America,  
District of Montana,—ss.

W. H. Meigs, being duly sworn, deposes and says:

That he is over the age of twenty-two years and a duly appointed, qualified and acting Assistant United States Attorney for the District of Montana; that on the 19th day of December, 1923, he served the foregoing praecipe for transcript of record by leaving a copy thereof for the said Sidney E. Knight with C. R. Garlow, clerk of the United States District Court for the District of Montana, at his office in the Federal Building, in the city of Great Falls, Montana, and by depositing an additional copy thereof, securely sealed, in an envelope, in the United States Post Office at Great Falls, Montana, with full prepaid registered postage thereon, the said envelope being addressed as follows:

Mr. Sidney E. Knight,

Cape Town,

Union of South Africa,

the same being the last known address of the said Sidney E. Knight, defendant and appellee herein.

This in compliance with paragraph 4 of Rule 33, Rules of Practice of the United States Circuit Court of Appeals for the Ninth Circuit, in and for the District of Montana.

(Signed) W. H. MEIGS.

Subscribed and sworn to before me this 19 day of December, 1923.

[Seal] C. R. GARLOW,  
Clerk United States District Court, District of  
Montana.

Filed Dec. 19, 1923. C. R. Garlow, Clerk. [52]

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CERTIFICATE OF CLERK U. S. DISTRICT  
COURT TO TRANSCRIPT OF RECORD.

United States of America,  
District of Montana,—ss.

I, C. R. Garlow, clerk of the United States District Court for the District of Montana, do hereby certify and return to the Honorable, the United States Circuit Court of Appeals for the Ninth Circuit, that the foregoing volume consisting of 53 pages, numbered consecutively from one to 53, inclusive, is a full, true and correct transcript of the record and proceedings had in the within entitled cause, and of the whole thereof, required to be incorporated in the record on appeal therein by praecipe filed, as appears from the original records and files of said court in my custody as such clerk; and I do further certify and return that I have annexed to said transcript and included within said pages the original citation issued in said cause.

I further certify that the costs of the transcript of record amount to the sum of Sixteen & 95/100 (\$16.95) Dollars, and have been made a charge against the United States.

In Witness Whereof, I have hereunto set my hand and affixed the seal of said court at Helena, Montana, this 14th day of March, A. D. 1924.

[Seal]

C. R. GARLOW,

Clerk.

By H. H. Walker,

Deputy. [53]

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[Endorsed]: No. 4222. United States Circuit Court of Appeals for the Ninth Circuit. United States of America, Appellant, vs. Sidney E. Knight, Appellee. Transcript of Record. Upon Appeal from the United States District Court for the District of Montana.

Filed March 18, 1924.

F. D. MONCKTON,

Clerk of the United States Circuit Court of Appeals for the Ninth Circuit.

By Paul P. O'Brien,

Deputy Clerk.

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In the United States Circuit Court of Appeals for the Ninth Circuit.

UNITED STATES OF AMERICA,

Appellant,

vs.

SIDNEY E. KNIGHT,

Appellee.



ORDER EXTENDING TIME THIRTY DAYS  
FROM FEBRUARY 19, 1924, TO FILE  
RECORD AND DOCKET CAUSE.

IN THIS CAUSE and on the 7th day of December, 1923, an order was duly made and given granting unto the plaintiff and appellant in the above-entitled cause thirty days in addition to the time allowed by the rules of this Court within which to have prepared and certified to the Circuit Court of Appeals for the Ninth Circuit, the record on appeal herein, which said additional time will expire on February 19, 1924; and it further appearing to the Court that the appellee resides in Cape Town, Union of South Africa, and that the notice of motion to approve statement of evidence on appeal will expire on February 25, 1924,—

NOW THEREFORE, upon good cause shown, it is hereby ordered that the said plaintiff and appellant may have thirty days' additional time from and after February 19, 1924, in which to have prepared and certified up to the United States Circuit Court of Appeals for the Ninth Circuit, the record on appeal herein.

Dated this 29 day of January, 1924.

BOURQUIN,  
Judge.

[Endorsed]: No. 4222. In the United States Circuit Court of Appeals for the Ninth Circuit. United States of America, Appellant, vs. Sidney E. Knight, Appellee. Order Extending Further Time to Prepare Record on Appeal. Filed Feb. 4, 1924. F. D. Monckton, Clerk. Refiled Mar. 18, 1924. F. D. Monckton, Clerk.

United States 6  
Circuit Court of Appeals  
For the Ninth Circuit.

UNITED STATES OF AMERICA,

*Appellant,*

vs.

SIDNEY E. KNIGHT,

*Appellee.*

—————  
BRIEF OF APPELLANT.  
—————

UPON APPEAL FROM THE UNITED STATES  
DISTRICT COURT FOR THE  
DISTRICT OF MONTANA.

—————  
JOHN L. SLATTERY,  
*United States Attorney.*

RONALD HIGGINS,  
WELLINGTON H. MEIGS,  
*Assistant United States Attorneys.*  
Helena, Montana.

FILED  
MAY 10 1924  
F. D. MONROE



No. 4222.

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**United States  
Circuit Court of Appeals  
For the Ninth Circuit.**

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UNITED STATES OF AMERICA,

*Appellant,*

vs.

SIDNEY E. KNIGHT,

*Appellee.*

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BRIEF OF APPELLANT.

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UPON APPEAL FROM THE UNITED STATES  
DISTRICT COURT FOR THE  
DISTRICT OF MONTANA.

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STATEMENT OF CASE.

This is an appeal on the part of the United States from a decree rendered by the United States District Court for the District of Montana on the 11th day of August, 1923, (Tr. 28-29) in a suit wherein the appellant prayed for the cancellation of a certificate of citizenship issued to the appellee.

The complaint was filed on June 22, 1922 in the said court, and alleges, in substance, that the appellee on November 5, 1900, at Helena, Montana, was admitted to citizenship by the State District Court of Lewis and Clark County, and that ever since that date has been, and still is, a naturalized citizen of the United States; that prior thereto he was a subject of Great Britain; a duly certified copy of the order, admitting appellee to citizenship, was annexed to the complaint, and by reference made a part thereof; the complaint further alleged that within five years after the issuance of the certificate of citizenship, and on or about the month of September, 1901, the appellee went to South Africa, and in that month took and established a permanent residence in said foreign country (Tr. 2-3), and ever since the appellee has resided, and still resides, in South Africa.

The complaint then alleges that the certificate of citizenship was fraudulently and illegally procured by appellee, because, at the time the same was issued, he did not intend to become a permanent resident of the United States, but intended only to obtain such certificate as indicia of such citizenship in order that he might enjoy the rights and protection of a citizen of the United States, and yet within five years after procuring the certificate to take up and maintain a permanent residence in a foreign country.



There was a prayer for the cancellation of the certificate as fraudulent (Tr. 4).

On the date of the filing of the complaint, a subpoena in equity was duly issued (Tr. 7-9), and an affidavit for the publication of the subpoena (Tr. 10), and a praecipe for the service of the same by publication (Tr. 11) were filed with the Clerk of the Court, and on the same day an order for publication of subpoena was made by the Clerk (Tr. 12-13); and on the same day the Clerk of the Court forwarded, by registered mail, a copy of the bill of complaint and the subpoena to the appellee at Cape Town, Union of South Africa (Tr. 13-14); on July 19, 1922, an affidavit of publication of the subpoena was filed with the Clerk (Tr. 14-17); thereafter, and on June 16, 1923, an order pro confesso was duly filed and entered (Tr. 18-19), the appellee being in default for failure to appear in the suit.

Thereafter, and on July 18, 1923, the case came on for trial, the appellee being in default and not represented. The government introduced in evidence a certified copy of a certificate made by the American Vice-Consul at Cape Town, South Africa, which certificate was executed pursuant to Section 15 of the Act of June 29, 1906 (Tr. 36-37). Thereafter, and on August 1, 1923, the court rendered and filed its decision in the case (Tr. 19-28); and on August 11, 1923, the court

rendered, and there was filed, its decree in favor of the appellee and against the appellant, and dismissed the suit (Tr. 28-29).

### ASSIGNMENT OF ERRORS.

Three specifications of error, relied upon by the appellant, are as follows:

#### I.

The Court erred in finding the evidence taken in said cause, at the hearing thereof, was insufficient to sustain the allegations of the bill of complaint herein.

#### II.

The Court erred in ordering a decree in favor of the defendant and against the plaintiff, dismissing plaintiff's bill of complaint.

#### III.

The Court erred in entering a decree in favor of defendant and against the plaintiff, dismissing plaintiff's bill of complaint.

### ARGUMENT.

It is apparent that the sole question is whether or not the certificate of the Vice-Consul is sufficient. Under the circumstances admitted by the default of the appellee, it should be *prima facie* evidence of the lack of intention on his part to be-

come a permanent citizen of the United States at the time of his application for citizenship.

In its decision, the court finds that the service of a subpoena by publication on a citizen residing abroad, in an action of this character, is due process (Tr. 21). The statutes of Montana were followed in all respects relative to the service by publication of the subpoena.

The government contends that the certificate of the Vice-Consul, executed in conformity with Section 15 of the Act of June 29, 1906, is sufficient to establish prima facie evidence that the appellee lacked the intention to become a permanent citizen of the United States at the time of his application for citizenship.

Said Section 15 provides, in part, as follows:

“If any alien who shall have secured a certificate of citizenship under the provisions of this act shall, within five years after the issuance of such certificate, return to the country of his nativity, or go to any other foreign country, and take permanent residence therein, it shall be considered prima facie evidence of a lack of intention on the part of such alien to become a permanent citizen of the United States at the time of filing his application for citizenship, and, in the absence of counter-vailing evidence, it shall be sufficient in the proper proceeding to authorize the cancellation of his certificate of citizenship as fraudulent.

and the diplomatic and consular officers of the United States in foreign countries shall from time to time, through the Department of State furnish the Department of Justice with the names of those within their respective jurisdictions who have such certificates of citizenship, and who have taken permanent residence in the country of their nativity, or in any other foreign country, and such statements, duly certified, shall be admissible in evidence in all courts in proceedings to cancel certificates of citizenship.”

It is observed that the diplomatic and consular officers of the United States in foreign countries are required, from time to time, through the Department of State, to furnish the Department of Justice with the names of persons in their respective jurisdictions who have obtained certificates of citizenship in the United States, and who have taken up permanent residence in the country of their nativity or any other foreign country; and that such statements of such officers, duly certified, are made admissible in evidence in all courts in proceedings to cancel certificates of citizenship.

It may well be argued that the statements required of such officers would fully comply with the provisions of the Act if they contained only the names of such citizens, so residing out of the United States, together with the bald conclusion of the officer that such persons were permanent residents

of the foreign country, of which the certifying officer was representing the United States in a diplomatic or consular capacity.

In the instant case, the Vice-Counsel's certificate goes beyond the apparent requirement of the statute and states the facts from which the certifying officer evidently draws his conclusion that the residence of the appellee in South Africa is permanent.

The certificate discloses that within about ten months after the appellee was naturalized, he went to Cape Town, South Africa, for the purpose of representing an American firm, and that he has constantly represented the said firm in South Africa ever since; that the appellee stated, under oath, in May, 1917, that he intended to return to the United States for permanent residence whenever his employers so desired. Clearly, his intention to remain in South Africa was for an *indefinite* period, for, if his employers never desired his return to the United States for permanent residence, it was his intention never to return to his adopted country.

The indefiniteness of his residence in South Africa brings the appellee squarely within the rule laid down in *Gilbert v. David*, 235 U. S. 561, 35 Supt. Ct. Rep. 164, in which case, Mr. Justice Day, speaking for the court, said:



“This matter of domicil has been often before this court, and was last under consideration in the case of *Williamson v. Osenton*, supra. In that case the definition of domicil, as defined by Mr. Dicey, in his book on “*Conflict of Laws*,” 2d ed. 111, is cited with approval. There change of domicil is said to arise where there is a change of abode and ‘the absence of any present intention to not reside permanently or indefinitely in the new abode.’ Or, as Judge Story puts it in his work on “*Conflict of Laws*,” 7th ed. sec. 46, page 41, ‘If a person has actually removed to another place, with an intention of remaining there for an indefinite time, and as a place of fixed present domicil, it is to be deemed his place of domicil, notwithstanding he may entertain a floating intention to return at some future period.’ ‘The requisite animus is the present intention of permanent or indefinite residence in a given place or country, or, negatively expressed, the absence of any present intention of not residing there permanently or indefinitely’ *Price v. Price*, 156 Pa. 617, 626, 27 Atl. 291.”

See also *Williamson v. Osenton*, 232 U. S. 619,  
34 Sup. Ct. Rep. 442

It should be borne in mind that at the time of the institution of this suit, the appellee had been residing in South Africa for almost twenty-one years and that that residence was commenced in

said foreign country within about ten months after he became an American citizen. It is rather curious and quite significant that in October, 1920, the appellee should call at the office of the American Consulate General at Cape Town, bearing a passport issued to him by the Government of the Union of South Africa, with a request for a visa to the passport to enable him to proceed to the United States. It further appears from the certificate of the Vice-Consul that in October, 1921, the appellee, an American citizen, declined to divulge the specific reasons for his application for a British passport in the preceding October, and that he admitted that he was not required to take an oath of allegiance to the British Crown, or to swear to the declaration made in applying for the passport. This is certainly strange conduct on the part of one who has, by naturalization as an American citizen, renounced forever all allegiance and fidelity to any foreign prince, potentate, state or sovereignty.

The appellee, according to the certificate, stated to the Vice-Consul that he did not know when he would return to the United States for permanent residence, and that he had voted on several occasions at elections in South Africa, and that he had acquired interests in local community affairs, and intended to take an active part therein during his residence in South Africa.

From the foregoing, it appears that the appellee

was acting in all respects as a British subject and exercising the franchise privilege of the citizens of South Africa. That, of itself, ought to be sufficient to show, at least *prima facie*, that his residence, in South Africa is permanent, and, taken in conjunction with the other facts stated in the certificate, and with the inferences that might properly be drawn therefrom, justifies the conclusion that it was his intention to reside permanently in South Africa when he first went there after procuring his certificate of naturalization.

While it is true that the statements provided for in Section 15 of the Naturalization Act are *ex parte* and extrajudicial, and, thus, as noted by Judge Bourquin (Tr. 25) invade the law against hearsay evidence, yet it is equally true that Congress has undoubted authority—within reasonable limits—to prescribe what shall be deemed competent and admissible evidence in a proceeding of this nature; and the courts have so held.

“The statements of the Consular Agents and Consul are made evidence under section 15, and, although of course they are not on that account conclusive, Congress has the power to make them competent evidence, and, as such, the United States should be entitled to whatever probative force the tribunal in fact be for whom the issue arises may give them. Indeed, at common law, the statements of an

official are admissible in evidence if they relate to acts within his personal knowledge and recorded in the performance of his duty. While it is true that this would not come within those rules, it is nevertheless of a kind somewhat similar and not without the power of Congress in the exercise of its control over the rules of procedure and evidence. The statements of the Consul, therefore, are admissible. It may be a question whether anything but his mere conclusion upon the question of permanent residence is properly admissible under the Statute; but, so far as his other statements are concerned, they aid the defendant, who cannot therefore complain of the addition. . . . . ”

United States v. Luria, 184 Fed. 643, 649.

The Luria case was appealed to the Supreme Court of the United States, which affirmed the decree setting aside and cancelling the appellant's naturalization certificate as fraudulently and illegally procured. In discussing the power of Congress to provide for the admissibility and competency of the Consular statements, required under Section 15, *supra*, the Court, speaking through Mr. Justice Van Devanter, said:

“Objection is specially directed to the provision which declares that taking up a permanent residence in a foreign country within five years after the issuance of the certificate

shall be considered prima facie evidence of a lack of intention to become a permanent citizen of the United States at the time of the application for citizenship, and that in the absence of countervailing evidence the same shall be sufficient to warrant the cancelation of the certificate as fraudulent. It will be observed that this provision prescribes a rule of evidence, not of substantive right. It goes no further than to establish a rebuttable presumption which the possessor of the certificate is free to overcome. If, in truth, it was his intention at the time of his application to reside permanently in the United States, and his subsequent residence in a foreign country was prompted by considerations which were consistent with that intention, he is at liberty to show it. Not only so, but these are matters of which he possesses full, if not special, knowledge. The controlling rule respecting the power of the legislature in establishing such presumption is comprehensibly stated in *Mobile J. & K. C. R. Co. v. Turnispeed*, 219 U. S. 35, 42, 43, 55 L. ed. 78, 32 L. R. A. (N. S.) 226, 31 Sup. Ct. Rep. 136, Ann. Cas. 1912 A, 463, 2 N. C. C. A. 243, as follows:

‘Legislation providing that proof of one fact shall constitute prima facie evidence of the main fact in issue is but to enact a rule of evidence, and quite within the general power of government. Statutes, national and state, dealing with such methods of proof in both



civil and criminal cases, abound, and the decisions upholding them are numerous. . . .

‘That a legislative presumption of one fact from evidence of another may not constitute a denial of due process of law, or a denial of the equal protection of the law, it is only essential that there shall be some rational connection between the fact proved and the ultimate fact presumed, and that the inference of one fact from proof of another shall not be so unreasonable as to be a purely arbitrary mandate. So, also, it must not, under guise of regulating the presentation of evidence, operate to preclude the party from the right to present his defense to the main fact thus presumed.

‘If a legislative provision not unreasonable in itself, prescribing a rule of evidence, in either criminal or civil cases, does not shut out from the party affected a reasonable opportunity to submit to the jury in his defense all of the facts bearing upon the issue, there is no ground for holding that due process of law has been denied him.’ (Citing a number of cases).

‘‘That the taking up of a permanent residence in a foreign country shortly following naturalization has a bearing upon the purpose with which the latter was sought, and affords some reason for presuming that there was an absence of intention at the time to reside per-

manently in the United States, is not debatable. No doubt, the reason for the presumption lessens as the period of time between the two events is lengthened. But it is difficult to say at what point the reason so far disappears as to afford no reasonable basis for the presumption. Congress has indicated its opinion that the intervening period may be as much as five years without rendering the presumption baseless. That period seems long, and yet we are not prepared to pronounce it certainly excessive or unreasonable. But we are of opinion that as the intervening time approaches five years, the presumption necessarily must weaken to such a degree as to require but slight countervailing evidence to overcome it. On the other hand, when the intervening time is so short as it is shown to have been in the present case, the presumption can not be regarded as yielding to anything short of a substantial and convincing explanation. So construed, we think the provision is not in excess of the power of Congress.”

*Luria v. United States*, 231 U. S. 9, 34 Sup. Ct. Rep. 10.

Resuming, the government contends that the certificate of the Vice-Consul, in the instant case, does not invade the rule against hearsay evidence, but that it is admissible and entirely competent to prove the permanent residence of the appellee in a foreign country within the period prescribed

by Section 15 of the Naturalization Act; and that, there being no countervailing evidence on the part of the appellee, the force of the presumptions arising from the facts contained in the certificate of the Vice-Consul warrants only the rational conclusion therefrom, that the appellee, at the time he procured his certificate of naturalization, did not intend to become a permanent citizen of the United States; and that, therefore, the decree of the lower court should be reversed, with directions to enter a decree herein in favor of the United State.

Respectfully submitted,

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